ASL

Australian Society for Limnology Inc.

NEWSLETTER

Attention:

NEW NEWSLETTER EDITOR WANTED

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AUSTRALIAN SOCIETY FOR LIMNOLOGY INC.

The Australian Society for Limnology Inc. (ASL) is an Australian-based scientific society whose focus is the study and management of inland waters. The ASL was established in 1961, and has a current membership of over 650 researchers, managers, engineers, teachers and tertiary level students from all states and territories. Members have a strong professional interest in inland aquatic issues, including the maintenance of biodiversity, the maintenance and/or restoration of water quality, and the wise use of aquatic resources. The Society also has a strong interest in fostering the scientific and intellectual development of tertiary students.

The Society includes members working in government agencies, tertiary institutions and many industries related to aquatic resources. Through their daily activities, members have contact with local communities and are in a sound position to interpret and advise on inland water issues. The Society has a substantial knowledge base, and has assumed a responsibility to ensure that this is available to those who manage inland waters.

Accordingly, the charter of the ASL is to further our understanding of Australia's inland waters and to promote their wise use and sustainable management. In this manner we will contribute to the continued existence of this valued resource and the maintenance and enhancement of the quality of life for all Australians. The ASL regularly produces a newsletter with notes on limnological activities, articles of interest, book reviews and announcements of upcoming events likely to be of interest to Members.

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Material for publication in the Volume 43 #1 newsletter (March Issue) is due on Friday 25 February 2005.

All articles should be forwarded, if possible, as unformatted text on a disk or via email.

ASL Home Page - http://www.asl.org.au/

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Membership Information and contact details of the Regional Executive Members can be found at the back of this Newsletter.

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FROM ME

WANTED - NEWSLETTER EDITOR

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Ok, so another year has come and almost gone and another four newsletters have come and almost gone (sorry if this is late getting to you... too many deadlines).

At the AGM I announced that I would like to pass on the Newsletter Editor's role to another member within ASL and hence am now calling for members who maybe interested in this worthwhile position to contact me (Rhonda.Sinclair@csiro.au). I know this may sound crazy, but I've actually enjoyed the experience, you actually get to read ALL the articles (for editing) and receive feedback from the members.

Anyway I am prepared to stay on as Newsletter Editor until we can find a replacement, but don't be shy!! It's not too hard.

So as everyone heads off for their Annual Leave, I do hope that you all have a fabulous break and eat, drink and be merry!!

Best wishes,

Rhonda

PRESIDENT'S REPORT

Hello all,

Thanks to all for giving me the opportunity to have a go as ASL President! For those of you who don't know me: I work as research scientist at the research institute of the Department of Sustainability and Environment in Victoria, the Arthur Rylah Institute. My passions include aquatic macroinvertebrate communities, invasive species and the links between scientific research and management and policy activities. I am looking forward to the next two years as ASL President working with the ASL Executive, the congress organizing committees for the next two congresses and would also like to welcome our new representatives on the executive: Darren Ryder, Angus MacGregor and Brenton Zampatti.

I would like to thank the 2004 congress organizing committee for the fantastic job they did in pulling together this year's congress in record time!

ASL has many members, yet it is a small core of people who, again and again, make things happen - the web page, the newsletter, the congresses, evaluating outstanding scientific contributions through our medals and prizes, keeping on top of our finances and memberships, our links with FASTS, our local chapters, policy developments, and many others. Our culture also includes our wonderful door prize reports (the REAL reason many of us attend the annual AGM). These activities are important to our society and if you feel at all tempted to contribute - do contact us!

As the executive of the society we would like to represent your interests, so do let us know what these are. For example, at the AGM in Adelaide we had quite some discussion about the 2006 congress and some of you have spoken to me about this since: the issue is whether we join in with a large international conference organized by the Society of Wetland Scientists, or whether we maintain our patterns of keeping every second conference as cheap as possible for the majority of our members. To represent your interests on this we need to know what these are, so let us know!

On the 8, 9 and 10th March 2005 "Science meets Parliament" is on again and once again we are seeking ASL members who would like to attend.

The Briefing Day on Tuesday is extremely important to attend, even for those delegates who have been to SmP previously, so please put aside all days in your calendar. The morning program, from 10 am till 2 pm on Tuesday 8 March will be compulsory for all registrants. It will incorporate a National Press Club address by the Minister for Science, The Hon. Dr. Brendan Nelson, in his first major speech since being re-elected. The afternoon program will be targeted at first time participants. Adequate discussion time as well as networking opportunities have been requested at all previous five SmPs. Consequently, those not involved in the afternoon session may spend the afternoon meeting their partners and planning their priorities for their appointments with politicians the next day.

If you would like to represent ASL at SmP but would need some financial assistance, please email me an **Expression of Interest** as soon as possible. Outline the issues you wish to raise, and make a short case as to how your involvement would serve Australian limnology. Further information on the costs of attending SmP and monies available for assistance through ASL will be provided as soon as they become available.

All the best to all of you over the holiday and summer period.

Until the next newsletter.

Sabine Schreiber

* * * 43rd Annual General Meeting of the Australian Society for Limology

2 December 2004, Adelaide, South Australia * * *

(p = proposed, s = seconded)

1. **Adoption of Agenda:**

Carried (p = R. Marchant, s = T. Doeg)

2. **Apologies:**

P. Schultz, N. Rea, J. Chambers, S.J osey

3. **Acceptance of Minutes of Last AGM:**

Carried (p = S. Schreiber, s = P. Papas)

4. **Matters Arising:**

None.

5. **President's Report:**

Huge thanks to this year's Executive, and particularly to Sabine Schreiber, our VP, for her consistently sensible advice, the Secretary Richard Marchant for handling our correspondence, attending FASTS Board meeting in Melbourne, and for his intimate knowledge of ASL's machinations, Margaret Hart (Treasurer/Membership Secretary) for maintaining the Society's finances and membership records, particularly as the membership directory goes online, Newsletter Editor Rhonda Sinclair for her timely reminders, constant good humour, and consistent production and collation of an excellent newsletter, and Webmaster Simon Josey for maintaining our burgeoning website, and swiftly coordinating our listserver and web additions.

I note with regret that Simon wishes to relinquish the position so we are looking for a replacement but Simon has offered to continue until the new person can take over. I also want to thank Frederick Bouckaert, the ACT Exec rep, who represents ASL at FASTS meetings and gives us reports on the FASTs AGMs. He also guides us on how changes in FASTS might affect ASL interests and this is important.

ASL Activities and Highlights of 2004 ~

* Enthusiastic thanks from the NZ Exec and conference attendees to the Waarnambool conference.

* Closer interactions with ASFB, they are keen to emulate our progress with policies and SmP. Similarly, we supported the Wetlands Forum at the Wetlands Centre, Shortland, Hunter River; Ben Gawne and Max Finlayson proposed as 'Noted Scientists' as our representatives during National Science Week.

* No SmP this year, apparently due to the election. But water issues still firmly on the political agenda, assisted by drought and water pressures in Melbourne and Sydney.

* ASL membership database now on line thanks to Simon, Marg, and Shane Mortenson.

* CSIRO journal deals for ASL members - Dugald McGlashan.

* Representation by Sabine on Australian Water Partnership (AWP) on Steering Committee - global partnership with emphasis on supporting countries in their sustainable management of water resources (with a toolbox of Integrated Water Resources Management). Also, ASL members attending the various international conferences such as SIL in Finland, NABS, and making friends with the wildlife in Sweden. Contributions to the media during Science Week.

* ASL policies continue, release of freshwater protected areas book by Jon Nevil and Ngaire Phillips (I have a few copies), and ASL made a submission to the Australian Government on their *Directions for the National Reserve System* paper, congratulating them for the initiative and suggesting inclusion of some freshwater reserves. Ben - progress on the salinity policy?

* Drafted a follow up letter to past winners of the ASL Medal (then Jolly Award), minting medals to send to them retrospectively.

* Excellent initiatives by regional reps to keep running State Chapter meetings - I must apologise to the Queensland group for having to renege on a promise to come and talk. Next year - I promise.

This is the end of my term as President and I welcome Sabine Schreiber to replace me. She has been a terrific VP, constantly alert to opportunities for the Society, quick to respond to calls for advice, and will be a strong President over the next two years. (p = R. Marchant, s = M. Hart).

6. Secretary's Report:

No teleconferences were held since the last AGM. All executive business was conducted by email which worked well, but does depend on the nature of the issues. In future probably most executive discussions and decisions will take place by email with teleconferences as a fall-back. The Bill Williams Travel Scholarship is open for applications with the hope of announcing a winner at the next ASL congress. Thus applicants should be aiming to attend an overseas conference in 2006, although the society would consider applications for travel in 2005. Currently the society hopes to be able to make one scholarship available every 2 years. The Environmental Defender's Office Ltd (EDO Sydney) contacted me earlier in the year asking whether ASL members would wish to register as experts to provide pro bono advice. (The letter was published in the March 2004 newsletter). I sent EDO a copy of the ASL list of experts and hope that this initiative will prove worthwhile for members. (p = B. Robson, s = S.J. Davis).

7. Treasurer's Report:

The ASL currently has 670 financial members: 465 ordinary, 133 student, 29 10 year, 24 life and 19 institutional. The financial reports are attached to these minutes. M.Hart briefly explained the figures and asked for questions; there were none. (p = M. Hart, s = J. Grigg).

8. Honorarium for Treasurer:

A. Boulton proposed a $2000 honorarium (s = M. Barson), which was carried unanimously.

9. Auditor's Report:

See Profit and Loss Statement, and Balance Sheet. (p = S. Schreiber, s = B. Downes).

10. Newsletter Editor's Report:

Four newsletters have been collated, printed and distributed since the last AGM, with Volume 42 # 4 December 2004 to be produced and distributed prior to Christmas. Many thanks go to all of you who provide reports, snippets and information for our newsletter. Since the introduction of "user pays" for hardcopies approximately one third of members receive the newsletter as a pdf.

Like all good "parties" it is now time to hand the editorship on and hence I will be asking for volunteers in the near future (and advertising in the newsletter) to take on the role. I thank everyone for your support. (p = K. Muller, s = D. Nielsen).

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC

REG. NO. A20309K ABN 54 606 483 226

PROFIT & LOSS STATEMENT FOR THE YEAR ENDED 30 JUNE 2004

	30-Jun-04 12 months		30-Jun-03 18 months
INCOME			
Bank Interest		$5,519	$5,969
Conference Receipts	70,879		62,061
W Williams - University of Adelaide	1,753		-
Subscriptions - Full Members	16,120		19,030
- Students	2,935		1,540
- Institutions	271		1,493
-10 Year	450		1,050
- MFR	2,182		-
Sundry Income	1,753		176
TOTAL INCOME		$101,862	$91,320
EXPENSES			
Audit & Accounting Fees	1,562		1,363
ASL Medal	1,951		1,371
Bank Charges	1,981		2,154
Conference			
- Early Career Award	500		-
- Student Travel Award	2,300		1,600
- Student Prize	400		300
- Venue, Travel, etc	49,119		51,380
- W Williams Travel Award	2,341		-
Depreciation	410		1,075
Honoraria - Treasurer	2,000		2,000
Miscellaneous Expenses	35		78
Newsletter	7,543		13,573
Publications / Brochures	-		3,343
Stationery, Printing, Postage, etc	882		2,791
Subscriptions - MFR	1,950		-
Subscriptions & Meetings - FASTS	2,880		2,189
Telephone	1,262		1,607
TOTAL EXPENSES		$77,116	$84,823
NET SURPLUS FOR YEAR		$24,747	$6,497
RETAINED SURPLUS AT START OF YEAR	115,147		108,650
RETAINED SURPLUS AT END OF YEAR		$139,894	$115,147

AUSTRALIAN SOCIETY FOR LIMNOLOGY INC

REG. NO. A20309K ABN 54 606 483 226

BALANCE SHEET AS AT 30 JUNE 2004

	30-Jun-04		30-Jun-03	
SOCIETY FUNDS				
Retained Surplus		$139,894		$115,147
Represented by:				
CURRENT ASSETS				
Nat Aust Bank - Cheque Account	45,645		24,922	
Nat Aust Bank - National Term Deposit	54,265		51,769	
Nat Aust Bank - Travel Award Term Deposit	39,401		37,463	
TOTAL CURRENT ASSETS	139,311		114,154	
NON-CURRENT ASSETS				
Office Equipment - at Cost	5,058		5,426	
Less Provision for Depreciation	(4,475)		(4,434)	
TOTAL NON-CURRENT ASSETS	583		993	
TOTAL ASSETS		$139,894		$115,147
NON CURRENT LIABILITIES				
Liabilities		-		-
NET ASSETS		$139,894		$115,147

11. ASL Medal Award:

The ASL Medal Committee is pleased to announce that the ASL 2004 Medal has been awarded to **Professor Patrick De Deckker** for the following reasons:

- ***A world-wide promotion of Australian limnology*** with an emphasis on paleoecology, salt lake ecology, and non-marine ostracods (Crustacea). Patrick has worked and/or lectured in many places overseas (e.g. China, France, Brazil, Belgium, Holland, Japan), has been or is currently on the editorial boards of five international journals, and is a member of eight professional societies. He has made some memorable contributions to Australian limnology through, for example, co-editing 'Limnology in Australia' (1986) with the late Prof. Bill Williams, a text of thought-provoking chapters that continue to be cited today, and as a co-editor of a Special Issue of *Hydrobiologia* due in 2005 to honour Bill Williams' contributions to limnology. He is internationally respected for his expertise in non-marine ostracod taxonomy, ecology and paleoecology, carbonate geochemistry, and the stratigraphy, sedimentology, hydrology and paleoecology of inland waters.

- ***An impressive contribution to limnological scientific research***, evidenced by a strong research publication record (including over 120 refereed publications and 7 books) that focus on the topics described above but also extend into the Quaternary marine record of the Australian region and continental environments based on lake deposits. He has conducted research and taught at Monash and ANU (where he is now Professor) and his research excellence has received several honours including the Verco Medal (1992) and a D.Sc. (University of Adelaide) in 2002.

- ***Excellence in education and communication*** illustrated by his 25 years in tertiary education and supervision of 6 ARC postdoctoral fellows, 11 PhD students, and current supervision of 8 PhD students. Patrick's manner is friendly but direct, his advice is widely sought, and his discussions and talks are characterised by a dry sense of humour and piercing intelligence. One of his letters of nomination attested to his enthusiasm and stamina in the field as an inspiration to students.

Prof. Patrick De Deckker shows strength and depth in all three categories that epitomise winners of the ASL Medal.

12. ASL Early Career Excellence Award:

First, we must record that Dr Ben Gawne excused himself from the Subcommittee because of a potential conflict of interest with one of the nominees and we thank him for this sensitive and gracious decision. We are also grateful for one of the previous winners of the Award to replace him at short notice.

The ASL Early Career Excellence Award Subcommittee was unanimous in agreeing that this year's winner's early career exemplifies professional limnological excellence in their early career with substantial and tangible contributions to published research, limnological education and mentoring, peer recognition, and excellence in communication and service to limnology, both theoretical and applied.

The recipient did her BSc (Hons) at Murdoch University (Zoology), obtaining a First Class grade and then graduated from University of Tasmania in 1996 with a PhD on habitat complexity, spatial scale and grazing interactions in a temperate river, supervised by Leon Barmuta. Several papers in international journals arose from this work, and are considered some of the best research in Australia and overseas on habitat complexity and macroinvertebrate grazing interactions in streams. After brief stints as an Environmental Officer, Phytoplankton Ecology Unit, Water and Rivers Commission, Western Australia and then an Associate Lecturer in Environmental Management and a Postdoctoral Research Fellow in the School of Environmental Science, Murdoch University, Western Australia, she took up a Lecturership in Aquatic Ecology at the School of Ecology and Environment, Deakin University, Victoria. One mark of her success in this position is winning the Deakin University Award for Teaching Excellence in 2004. This excellence in teaching and communication is one of the facets that her nominators all commented upon and indeed, one of the nominations came from a student who has been inspired by her teaching, mentorship and guidance.

The other facet that renders this year's recipient a worthy winner is her research excellence and we quote directly from one of her nominator's words who is himself one of Australia's best known ecological statisticians: "She is an articulate and passionate researcher, who seeks to maximise the quality of her research and teaching in all instances. She has particularly applied herself to understanding thorny issues in experimental design and data analysis. This often puts her in a somewhat unpopular place of demanding scientific rigour that others cannot easily see or deliver but she is usually completely vindicated in her methodological stance...".

Finally, mention must be made of her service to limnology. Despite being an early career researcher, she has acted as a referee for several international journals and has provided sensible and measured advice to the authors that has substantially improved the work. She has also organized a large joint congress of ASL and the New Zealand Limnology Society and while this is not a criterion for this award, the facilitation of much discussion at that conference and the benefits to Australian limnology are undeniable.

Based on these achievements in education, research excellence, and communication in limnology, the Subcommittee recommends that this year's ASL Early Career Excellence Award is awarded to **Dr Belinda Robson**. Belinda is invited to give a paper at next year's congress and to join the Award subcommittee for next year.

13. Student Travel Awards:

Six students received assistance to attend the current congress: Lien Sim, Joanne O'Connor, Rebecca McIntyre from WA; Belinda Cant, Ernie Harbott and Deborah Thomas from Vic. A further application was refused from a student who was no longer an ASL member. Applicants must be financial members and must have been so for at least 6 months.

14. Student Awards:

Nearly 40 students from ASL presented high quality talks on their Honours and PhD research at the 43rd ASL meeting in Adelaide, and the panel of judges was hard-pressed to identify the best of an excellent field.

In the Honours category, the joint winners for best talks were Elise King (University of Melbourne) and Mini Hogan (Deakin University) with a commendation for the talk by Kim Markwell (Griffith University).

The best talk in the PhD category was by Timothy Page (Griffith University) with commendations awarded to Lien Sim (Murdoch University), Hugh Robertson (Deakin University), and Michael Hammer (University of Adelaide).

On behalf of Sinclair Knight Mertz, Andrew Sharpe awarded the SKM prize to Sarina Loo (Monash University) for her excellent talk.

The CSIRO journal *Marine and Freshwater Research* offered a book and a prize of a year's subscription to the journal for the best poster that captured the integrative nature of the journal's scope and this was awarded to Emilie Warner (University of New England) by the Editor Dugald McGlashan.

The ASL Prize for the best poster went to Jacqueline Salter (Monash University) with commendations awarded to Ruth Harlow (University of New England) and James Fawcett (Griffith University). Books donated by CSIRO accompanied these last two commendations.

ASL would like to thank the judges who included Barbara Downes, Karin Strehlow, Darren Ryder, Richard Marchant, Fran Sheldon (posters), Ruth O'Connor, Brenton Zampatti, Marcus Cooling, Ben Gawne, Sabine Schreiber and Andrew Boulton.

15. Door Prize Report:

Welcome to the 2004 ASL Door Prize award. For new members of the Society, the Door Prize is awarded at each ASL annual conference to the person, event or act that makes the meeting memorable well into the future. Over time, you will forget all of the talks from this year's conference, but you will always remember the winner of the Door Prize. Who remembers any of the talks from the Jenolan Caves conference (1995)? But who could forget the Line Dancers who gate-crashed the annual post-dinner celebrations? Or the John Howard impersonator after-dinner speaker at Moama (2001)?

But the Door Prize is not just some frivolous part of the conference. Winners of the Door Prize almost invariably go on to bigger and brighter careers in Limnology. The first Door Prize winner was Patrick De Deckker at the Mt. Gambier conference (1984). And where is he now? Winning the ASL medal!

Nominations for the Door Prize each year are gathered by a large and anonymous anarchical collective and assessed against strict rules.

This years conference started well, with out distinguished international guest **Geoff Petts** turning up wearing a tie. Whoever invited Geoff to speak at the conference should have warned him that ASL is the sort of society where the President often has trouble simply wearing shoes (and when he does, they generally don't involve complex operations like tying laces) and the most sought after souvenir of any ASL conference was the ASL stubby holder. Another observation I would like to make to Geoff. When you consider Napoleon's decision to invade Russia during winter, the decision to introduce cane toads into Australia, the development of nuclear weapons, the invention of mobile phones, McDonald's hamburgers and the Coalition of the Willing, I think the description of PHABSIM as "possibly the worst mistake ever" may be slightly over-stating the case.

Every ASL conference seems to throw up a new buzz word to put in our vocabulary. This year, the **New Word Nomination** goes to "cluster", as in a "cluster of organisations". I'm not sure I know what a cluster is, but I remember clusters. My mother used to make them. The recipe for a cluster is - take a handful of nuts and join them together with sweet melted chocolate. Very tasty. The only problem with clusters is that when the going gets hot, the chocolate melts and the nuts all fall apart.

Courage is always a term associated with the ASL Door Prize. And the most courageous title of any talk in ASL history has to be "Why the Wentworth Group is wrong." Has to be Door Prize material for **Marcus Lane**. Sadly, Marcus presented a thoughtful, logical and well reasoned argument to support his view. Every-one knows that thought, logic and reason are the very antithesis of the Door Prize, so Marcus was instantly disqualified for the award.

The annual **Conference Organisers** nomination has to be for the decision to declare P.J. O'Briens as the preferred alcohol supplier for Wednesday Night. Unfortunately, Wednesday Night at P.J.s is Trivia Night. If you were preparing a paper on the Trivia Night, the abstract would read - "Good evening f****ers. $%***$, nudge, nudge, wink, wink, @$$**ing s~~****^$. Norwegian girls. Phoau! Show us your bleeps." Not even six pints of extra strong Irish special ale could make that funny. Memorable? Yes (but a few years of therapy might expunge it from the memory). Worthy of the Door Prize? Certainly not!

And the **University of Adelaide** cannot escape without a nomination. Tuesdays BBQ was held in an area known as the cloisters - apparently a replica of some famous part of Oxford University. Clearly, this is meant to inspire students to academic greatness. So what dominates the walls of the cafeteria in the cloisters - portraits University of Adelaide Nobel Prize laureates or past students who have made good in the world of science or the arts? No, it's a giant illuminated sign - and ad for cosmetic surgery.

"We can laser away all those little physical imperfections .... We can cut out those ugly bits .... Forget academic success, we can make you beautiful, successful and happy". Students have enough to worry about without being subjected to such body-image rubbish at University just so the uni can make a few extra bucks from advertising. Memorable? Yes (a symbol of sad times at universities everywhere). Worthy of the Door Prize? Certainly not!

A few other nominations:

- **Andrew Boulton** for thinking that Mini Driver is a freshwater ecologist (in his dreams!)
- **Mini Hogan** (aka Driver) for multiple mobile phone offences in the AGM.
- **Marcus Finn** for a bubble plot that turned into a bubble bath.
- **Elise King** for the best subtle humour in a talk.
- **Joan Powling** for putting MDS plots in their right place.

Memorable? Yes. Worthy of the Door Prize? Sorry, not really.

It's the small things that make the difference between an ordinary event and a true Door Prize contender. Small things ... like a padlock. Apparently on the **Gawler Bus Tour** on Wednesday afternoon, the bus traversed all the way across one of the lower Murray barrages - a distance that varies between 1.5 km and about 3 km depending who you talk to - only to find that the gate at the far end of the barrage was ..... locked! Requiring a long bus reverse along a narrow barrage, complete with screaming ASL delegates who realised that a single sneeze from the bus driver would open up a whole new range of job vacancies in Australian limnology. Memorable? Yes! Worthy of the Door Prize? Yes! A winner? Close .... But no!

Like last year (won by a talk on the sounds made by invertebrates in a West Australian wetland), the prize goes to a positive contribution - the presenter of what will be remembered as an excellent presentation. The talk had all the hallmarks of a worthy Door Prize winner. The title was a tease - sounds interesting, but gives away little. The presenter was appropriately dressed for the presentation. The subject matter suitably trivial, but on reflection had a serious side. Background evidence from a wide range of literature was well researched (Google and obscure trade journals). The methods used were simple and presented in an innovative style (using video). Importantly, it needed no stats to prove the case. It was extremely interesting, funny and well presented. And more importantly, the audience was enthralled and entertained, not knowing quite what was coming next, but eagerly waiting for it. And the ultimate test. Memorable? Yes. Worthy of the Door Prize? Definitely! The winner? Yes!

This years winner of the 2004 ASL Door Prize goes to **Ben Smith** from SARDI Aquatic Sciences for his in-depth investigation into wader safety in the talk "Going under in chest-high fishing waders: Sink or Swim? ... or Float?".

16. 44th Congress:

Tasmania would like to bid for hosting the ASL Annual Conference in 2005 in Hobart. Tasmania has not hosted the ASL conference for 14 years and we feel it's time to remind you mainlanders what you're missing.

The conference venue would be the University Centre at the University of Tasmania's Hobart campus. The Stanley Burbury Theatre seats 350 people, and can be split into 3 smaller theatres with seating for 224, 80 and 80 people, and there are also other lecture theatres nearby and available if necessary. The Centre has a large foyer area for the registration, opening mixer and poster sessions, with an ample outside area to take advantage of good weather.

The University Centre has been tentatively booked from the afternoon of Monday 28 November through to lunchtime of Friday 2 December (it is booked for another conference the following week Dec 5-9). Hobart's weather is cool to mild and sunny at this time of year, with temperatures averaging 22°C max (11°C min).

We have booked it for late-November/early December as on-campus accommodation, which we consider essential to the conference, is not available at other times of the year. Accommodation is available on campus in the student residential colleges, and there is a range of alternative accommodation options in Sandy Bay, Battery Point and the city centre (30 min walk from the uni).

There are three airlines, Qantas, Jetstar and Virgin Blue, operating out of Hobart airport and providing up to 16 flights a day. The airport is 30 mins drive from the university and there are travel buses available for students.

We're considering a conference schedule similar to the previous couple of conferences with registration and a social mixer on the Monday afternoon/evening, and the postgrad mixer in the afternoon. Tuesday would begin with the official opening by the President and a plenary session, followed by talks, and the poster session. Tuesday evening would be a social BBQ. Wednesday would begin with a plenary followed by talks until lunchtime, field trips in the afternoon and a free evening. Thursday would also begin with a plenary session and be followed by talks and the conference dinner. Friday morning would be talks and the conference would close at Friday lunchtime. We haven't decided on caterers or venues for social events at this stage but we are spoilt for choice around Hobart.

There are numerous locations within 1 or 2 hours drive of Hobart which are ideal for half-day field trips (e.g. Mt Field National Park, the Warra Long Term Ecological Research Area, Port Arthur), and we are also considering organising some 2-3 day post-conference field trips (e.g. trout-fishing the Western Lakes, rafting the Huon, Freycinet National Park).

We hope to secure sponsorship for student prizes, and are also considering offering a prize for the best talk given by an established researcher/manager to be judged by students. We are also currently exploring the range of potential sponsors to cover other expenses, and there are some uniquely Tasmanian sponsorship opportunities which we will be following up.

We are confident of hosting a memorable and affordable conference in 2005 and hope the members of ASL support Tasmania's bid. On behalf of the ASL 2005 organising people: Danielle Warfe, Jo Clapcott and John Gooderham. (p = A. Boulton, s = B. Robson).

17. Future Congresses:

A suggestion has been received by the President that ASL holds its 45th Congress at Cairns in July 2006 in conjunction with a meeting of the Society of Wetland Scientists. The suggested registration costs are $500-600. After some discussion it was suggested that to lower costs the ASL may overlap just one day with the SWS meeting. A show of hands indicated general support (25 out of 39) for this but clearly the matter is not settled and no decision is likely before the next AGM. As an alternative venue for 2006, B. Gawne suggested Mildura. In 2007 the ASL is due to hold another joint congress with the NZ Limnological Society in NZ.

18. Election of the Executive:

The following were nominated and elected unopposed:
President - S. Schreiber (previous Vice President)
Vice President - S. Bunn (p = S. Schreiber, s= M. Grace)
Treasurer - M. Hart (p = S. Schreiber, s = B .Downes)
Secretary - R. Marchant (p = S. Wild, s = D. Ryder)
Vic - B. Downes (p = R. Marchant, s = B. Robson)
NSW - D. Ryder (p = A. Boulton, s = B. Hart)
ACT - F. Bouckaert (p = A. Boulton, s = R. Marchant)
SA - B. Zampatti (p = P. McEvoy, s = F. Sheldon)
NT - N. Rea (p = R. Marchant, s = F. Sheldon)
Qld - F. McKenzie-Smith (p = A. Boulton, s = F. Sheldon)
WA - S. Wild (p = M. Hart, s = J .Davis)
Tas - D. Warfe (p = R. Marchant, s = P. McEvoy)

S.Schreiber also suggested that the Executive have a student representative. Angus MacGregor was nominated by S. Schreiber (s = M. Hart).

19. Election of Auditor:

M. Hart proposed that Castor Galgut Pty Ltd be re- elected (s = R. Marchant).

20. General Business:

(a) K. Muller suggested that managers were not fully recognised by the Society and that this was reflected in the wording of society documents e.g. ASL medal rules. This will be examined by the executive.
(b) Conference sponsorship: P. McEvoy was able to obtain sponsorship for this congress from Dept of Environment and Heritage (Federal Government) and from local sources. He encouraged future organisers to do likewise.
(c) B. Robson pointed out that in the latest round of ARC grants few were given to research on inland waters, despite this being a priority area. The causes of this need to be investigated. She suggested the executive approach FASTS about this.
(d) D. McGlashan on behalf of the journal Marine and Freshwater Research and CSIRO Publishing thanked the ASL and its members for support over the last few years.

Meeting closed at 6pm.

ASL Executive Meeting, 2 December 2004, Adelaide SA

1. Student Prizes:

A. Boulton suggested the student prizes should be doubled to $200. This was agreed unanimously.

2. Donation to International Commission for Zoological Nomencalture (ICZN):

ICZN are soliciting donations from scientific societies. The ASL donated $150 in 1993. After some discussion it was resolved that a donation would be made but that the ASL would not make automatic donations each year.

3. Future Teleconferences:

S. Schreiber would like to hold a teleconference of the executive in February or March 2005.

!!!!!! STOP PRESS !!!!!!

For those of you who have just read the Minutes of the AGM, you'll be aware that **Simon Josey** has decided to resign from his position of Webmaster. This was discussed at the AGM in Adelaide and Simon put out a call for a replacement via email on 7 December. I'm delighted to inform you all that we have a new Webmaster.

Simon had informed the ASL Executive of his decision to relinquish the role on 11 November, and I thought readers might like to share some of the comments received in regard to Simon's dedication.

"Thanks for this advance notice and for offering to fill in till we find someone else to inhabit your massive shoes! On behalf of the Society and personally, I want to thank you for the absolutely fantastic job you have done. Efficient and innovative in all ASL web activities, I have especially enjoyed it at meetings when people have seen you for the first time and said "Ohh! So you're Simon Josey" - few other ASL members are so famous and such household e-names!!

I'm sure the rest of the Society share my appreciation and while this is sad that you must relinquish the role, we really are grateful for your huge contribution. Beyond the web, we do hope you'll continue as an active member of ASL and I echo your sentiments that we have a vibrant and enjoyable society whose volunteers are such a crucial part of the group."

"You set it up (I'll never forget my first viewing of the cute wagging invertebrate),
You made it fantastic,
You changed, improved, fixed up anything at the speed of light
Online registration? Hah! no problem
Always with such aplomb and grace
Very large shoes to fill.
Simon, thankyou."

"Simon made things so easy. Hope we get another wonderbod!"

"I'd like to echo the Executive's comments and congratulate you for the outstanding job you have done for the Society. It will be difficult to fill your shoes but as ASL is so vibrant I'm confident we can attract someone to take over the role."

"The web will just not seem the same. Simon has helped me out of a few pickles to which I am eternally grateful".

"Thanks Simon for your efforts over the years".

THANK YOU SIMON

And now the news you've all been waiting for ..... ASL's new webmaster is:

Heather Shearer – welcome aboard

Heather currently works in the Land Resource Officer (Planning and Environment) with the Department of Natural Resources and Mines, based in Nambour (QLD). Contact Details on the last page of this edition of newsletter).

Congratulations

The Societas Internationalis Limnologiae has awarded **Professor Peter Cullen** the honorable 'Einar Naumann-August Thienemann' Medal.

It was awarded to Peter for his exemplary scientific leadership and extraordinary efforts to communicate complex limnological and water resources issues to colleages and decision-makers, which over the past three decades have led to improved understanding about, and wiser allocation of, critical water resources in Australia.

SCUTTLEBUTT, RUMOUR AND PRATTLE

QUEENSLAND DEPARTMENT OF NATURAL RESOURCES AND MINES

NR&M REGIONAL BIOLOGISTS

Tariq and **Minal Kahn** at Goondiwindi have been working on water resource plans, collecting information on the distributions and critical links of selected assets in the Moonie system. They will conduct a field trip to the Moonie for a week starting December 13 with the intention of obtaining some data on fish distribution and abundance in the Moonie catchment. **The Khans** will also be meeting several landholders, visiting environmental assets and gathering some baseline information on the vegetation, persistence of waterholes, etc. in the Moonie system. This field trip will provide the baseline data for the future monitoring in the Moonie.

Meanwhile, the Bundaberg team of **Andrew McDougal** and **Marcus Finn**, along with Mackay biologist **Cath Thrupp**, have been working on spawning-event back-tracing using otolith aging for yellowbelly and leathery grunter from the Fitzroy Basin. Water resource plan work continues with survey work in the Burnett, Boyne and Fitzroy basins. **Marcus** recently attended the ALS conference in Adelaide to present his PhD work, and the pair are still working in earnest on their quest to identify the best pie in the region using a qualitative selection process.

AQUATIC ECOSYSTEM HEALTH UNIT, INDOOROOPILLY

A few faces have changed about the place with **Michelle Winning** seconded by the policy unit since July. **Marty Hancock** has departed for greener pastures and the unrelated **Peter Hancock** has accepted a post-doctoral appointment with the University of New England to continue his work on stygofauna. **Chris Marshall**, also from the AEH unit, has left for town permanently to the position of Principal Policy Officer (Water Resource Information). **Sharon Marshall**, previously an Ecosystem Health Monitoring Program field-team member, has joined the team

Jason Dunlop and **Nelli Horrigan** continue investigating the effect of salinity and turbidity on stream biota. They are currently using algal and macroinvertebrate ecotoxicity testing methods and **Nelli** has also completed a case study on simulating the effect of secondary salinisation in Burdekin and Fitzroy catchment with a paper being submitted to "Ecological Modelling". Further to this work, more data analysis is being conducted relating functional feeding groups of stream macroinvertebrates to turbidity and salinity gradients. The adventurous **Nelli** also recently attended the International Society for Ecological Informatics conference in South Korea.

Jon Marshall, **Alisha Steward**, and **Toni Radcliffe** from the environmental flows projects team have been busy working on a number of projects, with the added help of our new team member **Sharon**. The team has been researching the critical links to water for a number of ecological assets identified in the south-west of the State.

Jon, **Alisha**, and **Glenn McGregor** have begun work on another environmental flows project, aiming to generate conceptual models for bio-physical provinces in Queensland. A workshop was held on the 1st of December as part of this project, involving Departmental staff as well as Janet Stein from the Australian National University, who discussed her National Streams Catchment Database for Australia with us.

Jon is also beavering away at a hydraulic modelling project, with the help of the Department's GIS staff, converting field survey data recently collected from a site in the Dawson River, central Queensland, into GIS coverages.

Meanwhile, **Di Conrick** is continuing the development of quality management systems, now re-named quality environment systems. **Chris Thomson** is working on external consultancies and **Andrea Prior** is bending a re-design of the Ambient sampling program to her will. **Glenn** and **Jaye Lobegeiger** continue their algae work with samples starting to flood in from reservoirs as the weather warms up.

The twelve-member team led by **David Moffatt**, ably assisted by **Susan King** and **Dean Holloway**, has just completed the 5th sampling run for the Freshwater Ecosystem Health Monitoring Program (EHMP). These hardy folk contend with a shift from extremely dry to very wet conditions halfway through their work, and rampant bushfires in between. Despite the tough conditions, the team was still able to collect data at the vast majority of the 123 sites scheduled for assessment, providing an in-depth view of the ecological condition of the inland waterways of southeast Queensland.

From

Toni Radcliffe

SKM

This time last year the aquatic ecology group was in the middle of major field work in the River Murray wetlands in South Australia and the office was practically empty. We have now just delivered the draft report and are all considering early retirement.

Michael Lake is actually doing just that, returning to NZ to provide advice to the cricketers and the Department of Conservation. His unflappable style will be greatly missed. Other movements have included an upwards one for **Michael Shirley** who now heads up the WCMS Operations Centre but still gets his toe wet occasionally and an outwards one for **Kylie Lewin** who is expecting No. 2 early next year. She and husband (**Simon Treadwell**) are pretty excited but Simon continues to go with the flow and is involved in a number of e-flow projects and Living Murray initiative stuff.

Rod Hardwick has finished his stint at Melbourne Water and has decided to return to SKM's Newcastle office but regularly phones to remind us of his presence. **Emma Connell** is still on maternity leave and **Kylie Swingler** is beavering away on a wide variety of projects while **Andrew Sharpe** is doing great things convincing the clients that they need more monitoring. I have just returned from a month in Italy to arrive back to assist with the wetlands draft which has taken up a large chunk of my time over the past 12 months (hence the need to escape for a while!).

From

Melinda Holt

The Murray-Darling Freshwater Research Centre

"After almost 10 years at The Murray-Darling Freshwater Research Centre in Albury (and Monash Uni and the CRC for Freshwater Ecology), and after a maelstrom of floods, droughts, fish, irate farmers, droughts, naked holiday-makers, abandoned bars, droughts, star-filled nights, artificial macrophytes which didn't work, droughts and methane-producing Albanian lunches, I have now taken up a lectureship at Charles Sturt University.

I will be lecturing in Environmental and Applied Statistics (which, to all those who know me, is a little like Mr Magoo giving driving lessons!) and continuing to conduct my own esoteric brand of research in river and fish ecology. I will continue my close association with the MDFRC through collaborative projects (including a new MDBC spawning and recruitment of fish grant) and co-supervision of students. I also look forward to maintaining collaborative links with staff and students at La Trobe University in Wodonga.

Early next year, I will be taking up a Harold White Fellowship at the National Library of Australia, collating historical accounts of fish distributions in rivers in the Murray-Darling Basin.

I want to take the opportunity to thank all those who have made the last 10 years such a rewarding experience, especially those who made time to listen to my rantings, shared time in the lab, field and tearoom, endured my attempts at supervision and collaboration and supported my attempts to run a large-scale, long-term project which never quite got off the ground! There are too many to list, but I thank you all.

I thank Terry Hillman and Peter Cullen, who were especially supportive in the early days and Ben Gawne and Gary Jones for their continuation of that support. Gerry Quinn and Barry Hart produced miracles when they were needed. Sam Lake - a minor miracle himself - never flagged in his enthusiasm for, and constructive criticisms of, my ideas and work and I cannot thank him enough. But to the Campaspe team (which changed much more often than the weather), I am in most debt. But for their dedication, commitment, tireless hard work, enthusiasm and good company, we could not have accomplished half of what we did."

Paul Humphries

NEW CONTACT DETAILS:

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CRC For Freshwater Ecology

Register now for the next AUSRIVAS course

The AUSRIVAS Online training course is offered twice a year by the CRC for Freshwater Ecology and the University of Canberra. The course aims to teach the skills and knowledge needed to assess river health to an acceptable standard using the AUStralian RIVer Assessment System (AUSRIVAS) methods. Those who complete the requirements successfully are eligible for accreditation from the relevant state or territory agency.

There are no prerequisites for this non-award course, other than registration and payment. The theory of assessing river health can be learnt entirely online in four interactive modules that can be completed over a 12-week period. A 4-day practical face-to-face workshop is offered as a fifth module, teaching the practical skills required. The workshop module is held in Canberra but if there is sufficient demand from a group or agency we can arrange a workshop in any State or Territory.

The next AUSRIVAS Online course is scheduled to start on 21 February 2005 and enrolments are required by 31 January 2005. Please register your interest at http://ausrivas.canberra.edu.au/Bioassessment/Macroinvertebrates/Training/ or contact **Sue Nichols** at nichols@freshwater.canberra.edu.au for more information or queries regarding a workshop outside the ACT.

The QLD gang at the AUSRIVAS workshop held in collaboration with the Department of Natural Resources and Mines (NR&M) in Brisbane, October 2004.

The CRCFE was well represented at the recent 5th International Symposium on Ecohydraulics, and the 4th Australian Steam Management Conference.

The 5th International Symposium on Ecohydraulics was held in Madrid, Spain, 20th to 24th September. **Brad Pusey** from Project A250 (Flow-ecology response models) presented a paper (Hydrologic regime and its influence on broad-scale patterns of fish biodiversity in north-eastern Australian rivers) and **Mark Kennard** presented his Ph D research on fish as indicators of stream health in Queensland in a long session devoted to similar work for the European Water Directive,

Angela Arthington gave a paper on flood-drought effects on fish assemblages of Cooper Creek (Dryland Refugia Project), and ran a one-day course on environmental flow methods. **Martin Thoms** presented a paper on managing for hydraulic patch diversity in a regulated upland river.

Numerous CRCFE people also presented CRCFE projects at the recent Stream Management conference held in Launceston (19th to 22nd October) including: **Janey Adams** on oral histories of the Narran Lakes, **Orla Murray** on wetland patch characteristics of the Narran Lakes, **Scott Rayburg** on stream network patterns in the Narran Lakes, **Shane Brooks** on analysis of stream restoration projects, **Richard Norris** on the multiple lines and levels of evidence approach to detecting ecological response, **Nick Bond** on disturbance regimes and stream restoration, **Mark Southwell** on organic matter geomorphic variability in the Barwon Darling River, and **Stephen Mackay** on the interaction between hydraulic habitat and riparian revegetion in controlling macrophyte growth.

CENTRE FOR RIVERINE LANDSCAPES
GRIFFITH UNIVERSITY, BRISBANE

LeRoy Poff, Colorado State University (CSU), Fort Collins, and **Robert Naiman**, University of Washington, have been visiting with **Angela Arthington, Stuart Bunn** and colleagues from **CRL** to develop a program of research on flow-ecology science to underpin river restoration partnerships. The first event in this program was a Hydro-ecology Workshop held at Griffith University on 15-16 November, attended by CRL and Queensland resource agency staff, **Sam Lake**, Monash University, and **Peter Cottingham**, CRCFE. **Julian Olden**, CSU, Fort Collins, also visited with CRL staff **Mark Kennard** and **Brad Pusey** to work on the application of Artificial Neural Network methods to analysis of fish-flow relationships and model development.

The Dryland Refugium team is about to leave on their last major field trip to Cooper Creek (**Andrew Cook**, **Harry Balcombe** and **Ryan Heise-Seabrook**) to sample fish, food webs and primary production. This work will complete a run of sampling aimed at capturing relationships between time since flow and fish abundance, diversity and condition and waterhole productivity. **Rick Cunjack** (University of New Brunswick) will be making the trip (via Canada) to investigate how the human body copes with a 55°C (-15 - 40+) change in ambient temperature in three days and its impact on the accuracy of fish measurements.

Mick Smith and **Nick Marsh** have recently moved on to new fields. **Mick** is now the Waterways Co-ordinator with the Maroochy Shire Council. **Nick** is the Chief scientist (Water Monitoring and Assessment) with the EPA, in Brisbane. We wish them all the best in their new positions. **Hossein Ghadiri**, **Ian Phillips** and **Calvin Rose** (Chief Investigators) were awarded a Griffith University internal grant to fund the project: "Dissolved and colloid-facilitated pollutant transport during coupled overland and soil-matrix flow conditions."

Merry Christmas to all.

From

Stephen (Harry) Balcombe

POSTCARD

So you want teach Creationism …. Again

If you live long enough in Australia, you begin to appreciate the cycles of life. Not just the obvious ones - the daily solar cycle, the monthly lunar cycle, the annual seasonal cycles, and the well-we never-saw-that-coming-so-we-haven't-put-long-term-water-savings-measures-in-place-drought-every-ten-year cycle - but the cycles of society.

It wasn't that long ago that Victoria had separate departments for fisheries, forestry, agriculture and nature conservation. Over a period, these were gradually amalgamated into a super department. And, as part of the natural cycle, these are slowly being split up again into its constituent parts. From where they will be reamalgamated again by a future government who, of course, knows better than any-one who came before.

Remember flares, disco, break-dancing, laminex tables, iced vo-vos. Well, they're back too. And yo-yos seem to make a regular comeback - usually coinciding with the appointment of a new advertising executive at a big carbonated caffeine-based cordial company ("I know, let's put out a yo-yo with the company logo on it!"). And the mullet hair-style is back! For younger members of the society, head down to your local Retro shop and check out all the cool things that are available now. And remember that all of these were cool "back then" as well.

So all things go in cycles. They become popular, fade into obscurity when it is realised that they don't really have anything to offer, and then become popular again when our race-memory forgets how useless they really were.

And so it is with Creationism - or more correctly - Creation Science. The latest "new idea" from one of the more conservative political parties is that creationism should be taught along with evolution in schools. New idea! I seem to remember this debate from some time ago. Quite apart from the question of just which Creation story should be taught - Aboriginal, Shinto, Navaho, the myriad of African creation stories, Wicca .....

Well, instead of going through the old debate again, let's expand it. Sure, you can teach creationism as an alternative to evolution, but you also have to teach fundamentalist views in all other subjects. Which means the text books need to answer a whole lot of questions across a whole new field of learning.

Ecology. Can we please have definitive answers/alternatives to the River Continuum Concept, the Patch Dynamic Concept, the Flood Pulse Concept, the Riverine Productivity Model and the Intermediate Disturbance Hypothesis? And the one true method for determining environmental flow recommendations? It would save us an awful lot of time and money if we had the answers.

Fluvial Geomorphology. "And the LORD God planted a garden eastward in Eden ..... And a river went out of Eden to water the garden; and from thence it was parted, and became into four heads." (Genesis 2:8 and 10, Authorised King James Version 1769). These were the Pison, Gihon, Hiddekel and Euphrates River. It will be nice to know how the river coming *out* of Eden split into 4. What then is the Stream Order of the river *in* Eden?

Natural Resource Management. Does the Garden of Eden qualify as a National Park even though there was cattle grazing in it? Would culling of snakes be seen as a valid management work plan?

Economics. "Thou shalt not give him thy money upon usury, nor lend him thy victuals for increase." (Leviticus 25:37). The new text book would need to explain the actions of the NAB, CBA, ANZ and Westpac.

Legal Studies. And put this in the legal textbooks on Sunday Trading: "Ye shall keep the Sabbath therefore; for it is holy unto you: every one that defileth it shall surely be put to death." (Exodus 31:14).

Media Studies. "You shall make for yourselves no idols" (Leviticus 26:1). Guess it's not *all* bad.

Genetics. Explain the present genetic diversity in human populations when the Great Flood reduced the world's population size to Noah, his wife (who has no apparent name in Genesis), and their three sons Shem, Ham and Japheth and their three wives (no names for them either - maybe some sort of entry in **Women's Studies** might be needed).

Taxonomy. "And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field" (Genesis 2: 20). Can we have the names please? Again, this would save a lot of trouble trying to make up more of those silly Latin names.

Human Society (Social Taboos 101). So there's Adam and Eve, and the sons Cain, Abel (dec.) and Seth and a whole stack of sons and daughters over the next 800 years (Genesis 5:4). Just how do you get an F2 generation out of that without ... well ..... you know ..... ?

And the one that I really want an answer to:

Entomology. On the fifth day "God made .... every thing that creepeth upon the earth after his kind" (Genesis 1:25). What needs to be explained is - what's the fascination with the beetles?

So answer these questions and maybe, we will start to talk about teaching Creationism.

There is one option. At the end of every lesson, the teacher could say that "God moves in mysterious ways". That about sums up the evidence. Or even better, the teacher could play the video of Billy Preston at the "Concert for Bangladesh" singing the greatest funk-gospel version of "That's the way God planned it, that's the way God wants it to be". At least us atheists would have something to sing about.

Sorry if fundamentalism is your belief - but that is what it is - a belief. You are entitled to it. You are entitled to teach it in Religious Studies. But don't pretend it is science.

P.S. Just in case you've ever wondered. "And the king said to Doeg, Turn thou, and fall upon the priests. And Doeg the Edomite turned, and he fell upon the priests, and slew on that day fourscore and five persons that did wear a linen ephod." (1 Samuel 22:18). Let's hope those linen ephods don't make a comeback in the near future! **Tim Doeg**

PROGRESS REPORT FROM THE ASL REPRESENTATIVE RESERVES WORKING GROUP

I am writing to you as convenor of the former ASL Representative Reserves Working Group.

In the later months of 2000 the ASL Executive recommended the formation of an internal working group to examine the issue of the use of protected areas (particularly those conserving representative areas) in the management of inland aquatic ecosystems.

The ASL Executive appointed Jon Nevill as convenor, and Deb Nias as policy officer. The working group, which was restricted to ASL members, created a wider reference group which covered both ASL and other experts, including those with expertise in terrestrial and marine protected areas. The membership of the Working Group was formed from volunteers responding to a posting on the ASL email forum. While the reference group was open to any interested person, in practice members of that group joined largely as a result of invitation. The Working Group attempted without success to include indigenous representatives on the reference group.

The Working Group had two primary objectives: (a) to prepare a discussion paper on the issue, and (b) to examine whether the ASL should develop an internal policy statement relating to protected areas, and make an appropriate recommendation to the ASL Executive.

The Working Group completed both objectives by late in 2003; however a number of minor editing issues delayed closure of the project until March 2004. The discussion paper was published in hard copy on 1 March 2004, edited by Jon Nevill and Ngaire Phillips. Appendix 11 of the discussion paper lists the membership of the working and reference groups. Electronic copies are available from http://www.ids.org.au/~cnevill/FW_ProtectedArea_SourceBook.doc. Please email me if you have trouble downloading that report. The report made a number of recommendations, largely targeted at State water management agencies. Several of these recommendations reflected a view that protected areas are a valuable management tool.

The Working Group recommended to the ASL Executive that the ASL should publish a policy statement on the use of inland aquatic protected areas. A draft policy statement was prepared by the Working Group and passed to the Executive in February 2004. The Executive are in the process of reviewing this draft. While several other ASL policy documents have been published in the form of a folded A3 colour brochure, with illustrations, one option being discussed is to simply publish the policy as a html text file through the ASL website.

ASL members wishing to read or comment on the current draft policy document should contact Sabine Schreiber at sabine.schreiber@dse.vic.gov.au. This document is not currently available through a web link.

Jon Nevill, December 2004 [jnevill@netspace.net.au]

A BIT OF FUN ~ KEEP THOSE LETTERS COMING !!

Dear Onmil

I saw an advertisement for a macroinvertebrate or trophic ecologist. Should I apply?

N. B. Bone

****

Dear N. B.

Let us analyse this.

Do you have a backbone? If not, then you may be qualified and should apply. "Don't be ridiculous", I hear you say, "all ecologists have backbones". Not necessarily, N. B. .....even the most experienced ecologists have occasional attacks of invertebrateness.

Even if you have no backbone, you still may not be a macroinvertebrate. There's a lot of taxa to choose from - algae, bacteria, diatoms, zooplankton, politicians, etc., etc. The list goes on and on. Depends how large you are. Or pigmented.

Are you multi-layered? Hidden depths are ideal for a trophic ecologist, give you real insight into the mind of the hyporheic fauna.....if mind is the right word for something living in the riverine wetted interstitial zone (generally insignificant biota....sort of how you might feel when in a room full of bureaucrats talking about science funding).

On the other hand, if you are more an ephemeral puddle type of person, then you may not qualify as a trophic ecologist. Consider a career in science funding administration, instead.

Sincerely

Onmil

(Editors Note: a few members have asked how to contact Onmil, please email me and I'll pass on your request). Ask Onmil all the tricky limnological etiquette questions you really want answered.....

THE SUSTAINABLE RIVERS AUDIT AND 'INSIDE MFAT'

The Sustainable Rivers Audit

The Sustainable Rivers Pilot Audit in the Murray Darling Basin has been completed and the technical reports on each of the indicator themes (fish, macroinvertebrates, hydrology, physical habitat and water processes) are now available from the Murray Darling Basin Commission. The reports provide a summary of the development and trial of methods for a Basin-wide Sustainable Rivers Audit, based on results obtained for four Pilot Valleys: the Condamine-Culgoa in Queensland/NSW, the Lachlan in NSW, the Ovens in Victoria and the Lower Murray in South Australia.

The Sustainable Rivers Audit (SRA) program has now received the green light and will collect data for 23 river valleys of the Basin over an initial six-year period for fish, macroinvertebrates and hydrology. For macroinvertebrates, all 23 valleys will be sampled over a two year period, while for fish the six year cycle should provide two complete Basin assessments. Hydrology assessments will be undertaken once in every six year cycle, but substantial changes in the management of rivers flows can trigger additional assessments. Three other thematic groups of indicators will be developed in the next three years: physical form, riparian vegetation and floodplain health. A report outlining the design and work program of the SRA is expected to be published in the near future. In the first instance, reference condition will be used to provide an estimate of the relative condition of rivers. However, as the knowledge base grows, comparison of river health in a region over time or to a desired condition will become more important than a comparison against natural condition.

The Audit reflects the conceptual model of river ecosystem function that states that impacts can occur at the landscape, river reach or site scale, impacting on biota and their ecology at all scales. This means biota provide good indicators to assess impacts at different scales. In assessing river health, it is important to consider biological and physical elements, structural and functional (process) indicators and 'drivers' as well as 'outcomes'. These key concepts were used to identify the indicators for the Audit.

The Audit will detect any ongoing large scale change to rivers rather than changes happening at a particular site or point in time. For the first time, it will provide us with a standard framework for comparing health information across rivers and throughout time. While there are many ongoing programs by state or territory agencies investigating specific parts of the Basin's rivers, the Audit will provide the bigger Basin picture of our rivers' health. The Audit will provide river managers and Basin communities with the first geographically comprehensive understanding of the health of the Basin's many rivers and streams and will do much to inform future public discussion about the changing state of our rivers. The Audit is likely to stimulate further investigations into the causes of poor river health and will provide the community with better information to inform debate about regional river management and planning.

In 2004-2005, the implementation of the full program will start with half of the Basin's valleys being sampled for macroinvertebrates, and one third of the valleys being sampled for fish. For macroinvertebrates only one season's data will be collected, with the valleys in the north of the Basin being sampled in autumn and the valleys in the south sampled in spring. Fish sampling will occur throughout autumn, but this sampling season may vary from valley to valley depending on the most optimal time of year.

The state level jurisdictions will be responsible for collecting the data, while the Commission will undertake a coordinating role. The data will be assessed and audited by ISRAG, a group of four independent ecologists: Dr. Peter E. Davies, Dr. John Harris, Dr. Terry Hillman and Assoc. Professor Keith Walker. The first report to Ministerial Council will be an implementation progress report. After three years a first full Audit report comprising all three themes across all Basin valleys will provide the first report card for the Basin. The results of the Audit will be made available to the general public via the MDBC website.

More information on the project can be found at: http://www.mdbc.gov.au/naturalresources/sra/sra.html

Frederick Bouckaert
Theme Project Coordinator
Sustainable Rivers Audit Pilot Project
Murray Darling Basin Commission

Launch of 'Inside MFAT' website - revealing the science behind the Living Murray (MDBC Media Release, 25 October 2004)

A new feature on the MDBC website which showcases part of the science behind the Murray-Darling Basin Ministerial Council's Living Murray "First Step" decision has been released.

MFAT, or the Murray Flow Assessment Tool, relates river flow to potential habitat condition for river and floodplain environments. It was designed to help governments and communities make informed decisions on environmental flows for the River Murray system.

'Inside MFAT' is a website specifically designed to provide the public with a window into much of the scientific information and selected MFAT results that were part of the Interim Report of the Scientific Reference Panel released in October 2003. The MFAT tool provides an assessment of the potential condition of habitat for native fish, waterbirds, floodplain and wetland vegetation for any given flow pattern. It can also provide an assessment of the potential risk of blue-green algal blooms.

"MFAT allows us to obtain consistent and repeatable assessments of the impact of different flow volumes and management on habitat condition. It uses the best scientific information available and, importantly, documents the source and confidence in that scientific information," according to Murray-Darling Basin Commission (MDBC) Chief Executive Wendy Craik.

"The Inside MFAT website is innovative and user-friendly and provides another mechanism for communities and environmental managers to access the ecological knowledge of over 60 scientists who informed the Living Murray process. The website will be a tremendous resource and will assist with the development of environmental watering strategies in the future," Dr Craik said.

Inside MFAT is located at: www.mdbc.gov.au/livingmurray/mfat

For information about The Living Murray: www.thelivingmurray.mdbc.gov.au, for general MDBC information: www.mdbc.gov.au

INFORMATION FROM AND FOR MEMBERS

Please Refer to the ASL Website Updates / Newsflash! Section

What's New on the Austrlian Natural Resources Data Library?

Are you interested in expanding your knowledge about your local river system and how it fits into the wider landscape? Then you should log onto the Australian Natural Resources Data Library (ANRDL) at http://adl.brs.gov.au/

Developed by the Bureau of Rural Sciences in partnership with the National Land and Water Resources Audit, this database provides users with reports, datasets and other databases covering such diverse topics as agriculture, forests, vegetation, climate and weather in Australia.

Users can download any relevant information and store it on their own computer for easy access. The ANRDL can assist in making assessments for future natural resource management and planning. The clipping tool allows users to obtain only the data that is relevant to their area.

The ANRDL is constantly being improved and updated with the latest information to make it easier to access. A key feature allows users to view data through a web-mapping tool and focus on a specific area of interest in a particular region anywhere in Australia. Text description that provides users with a summary of the background information on how the data was collected and collated is also provided.

Visit the ANRDL website to learn more about its features and how they can be applied to your area of interest. For more information please contact Evert Bleys on 6272 5627 or email Dataman@brs.gov.au

Weevile to help clear river weed (3 September 2004)

Weevils have been enlisted to eradicate a weed which is choking a Sydney River. Read more at: http://www.news.com.au/common/story_page/0,4057,10657839%255E1702,00.html

Tropical Rivers

During the River Symposium, a group of nine concerned scientists (Arthington, Bunn, Finlayson, Garnett, Georges, Kingsford, Pearson, Wasson and Williams) issued a statement about Australia's TROPICAL RIVERS, calling for a Vision for those rivers, to recognise their values, understand the context, improve scientific knowledge and implement management to protect tropical rivers. (Website)

Young Water Scientist of the Year Awards

Also during the Symposium, Sara Lloyd, from the CRC for Catchment Hydrology, won the Young Water Scientist of the Year Award, for her work on Quantifying Environmental Benefits, Economic Outcomes and Community Support for Water Sensitive Urban Design.

Ig Nobel Prizes

The Ig Nobel prizes were started in 1991, to award the sort of science that would never be recognised by the Nobel prizes. In the words of the organisers "Every Ig Nobel Prize winner has done something that first makes people LAUGH, then makes them THINK".

Many Ig Nobel prizes are awarded for achievements that seem silly or extremely strange at first, but when you look at them more closely they are often potentially useful. On the other hand, some of them are just plain weird.

Some of the winners of the 2004 Ig Nobel Prizes include:

- Medicine: Steven Stack and James Gundlach of the USA for their report on "The Effect of Country Music on Suicide."
- Physics: Ramesh Balasubramaniam of Canada and Michael Turvey of the USA for explaining the physics of hula-hooping.
- Public Health: Jillian Clarke of the USA for her investigation of the "Five Second Rule". (Which says if you pick up food within five seconds of dropping it on the floor, it's safe to eat. It's not always true).
- Chemistry: The Coca-Cola Company of Great Britain for producing a bottled water made from tap water, that was later withdrawn from sale for health reasons.
- Engineering: Donald J. Smith and Frank J. Smith of the USA, for patenting an improved comb-over (a technique used by bald men).
- Psychology: Daniel Simons and Christopher Chabris of the USA for demonstrating that when a person is concentrating on something, they can easily overlook other things, even a man in a gorilla suit.
- Peace: Daisuke Inoue of Hyogo, Japan, for inventing karaoke, which provides people with a new way to have to tolerate each other.
- Biology: Ben Wilson and Lawrence Dill of Canada; Robert Batty of the UK, Magnus Whalberg of Denmark and Hakan Westerberg of Sweden for showing that herring appear to communicate by farting.

Some Useful Websites?

Water Education Network, see http://www.awa.asn.au/education/

Waterkeepers Australia, see http://www.waterkeepers.org.au/default.asp

Check out a new science and environment website: http://www.sciencealert.com.au/. This contains free science and environmental research news from some of Australia's leading research organizations and conferences, a calendar of events and feature articles.

Australasia's most comprehensive ST&E conference and events calendar is at: http://www.sciencealert.com.au/events.htm. Please feel free to add your own conferences, workshops, public lectures and events. There is no charge.

Attention: Australian Microalgae Researchers

At the 10th International Congress of Culture Collections (ICCC10) in Tsukuba Japan, 9-15th October 2004 a resolution was passed by the World Federation of Culture Collections to establish a network of Algal Culture Collections in the Asia-Pacific region. This network will be co-ordinated by Dr Makoto Watanabe of the National Institute of Environmental Science (NIES) Japan and assisted by Dr Susan Blackburn of CSIRO Marine Research, Hobart, Tasmania.

Draft activities and objectives of the network and member countries are given below. This message is to seek expressions of interest from Australian researchers (Government agencies and Higher education facilities) who hold living collections of marine and/or freshwater microalgae and/or macroalgae to join this network. There is no minimum number of strains or species necessary to join the network. The aim of this initial call is to provide a list of Australian culture collections and species held by end of December 2004. This information will be collated for the entire Asia-Oceania region. Collections of freshwater algae and macroalgae are especially invited to reply as we at CSIRO Marine Research are probably unaware of your existence.

Respondents will be sent the complete Word document (outlining the Objectives, activities, action plan for '04-05 and member representatives) and a spreadsheet with suggested format for listing strains.

Objectives:

* Identify and foster synergy and linkages between algal culture collections in Asia Oceania.
* to build and improve capacity of algal culture collections in Asia Oceania in research, education and the applications of microalgae.
* to preserve and improve knowledge of algal biodiversity in Asia Oceania.
* to integrate and disseminate knowledge and data on algal culture collections in Asia Oceania.

Activities :

* Establish a database of strains held in algal culture collections in Asia Oceania (format to be determined but in line with international standards of data management for culture collections/biological resource centres proposed by GBIF and OECD's GBRCN recommendation).
* Convene regular meetings of the members of the network.
* Conduct training courses/workshops to develop skills.

needed within algal culture collections and by other algal researchers.

* Facilitate national and regional research initiatives inAsia Oceania on:
  - biodiversity.

- environmentally important algae including cyanobacteria, dinoflagellates, other harmful algal bloom species and threatened species.
- economically important algae, e.g. Spirulina, aquaculture species.

* Establish links with other regional networks.

Member countries: Australia, China, Indonesia, Japan, Korea, Malaysia, Philipines, Thailand, Vietnam, New Zealand (awaiting clarification)

Please reply to me using this email address.

Regards
Ian Jameson
Microalgal Biologist / Curator
CSIRO Microalgae Research Centre
CSIRO Division of Marine Research
email ian.jameson@csiro.au http://www.marine.csiro.au/microalgae/collection.html

One-Stop Water Shop

A new website called The Catchment Modelling Toolkit, allows users to access a wide range of data, software and supporting documentation intended to improve the efficiency and standard of catchment modelling. The Toolkit includes software to assist in modelling urban stormwater (MUSIC), the generation of stream flow (RRL), the assessment of rivers (RAP) and sediment transport (SedNet). The Toolkit has been developed by the CRC for Catchment Hydrology and CSIRO Land and Water.

Science Groove website

If you're the type of person that finds it funny to change the words to songs, than you will enjoy the Science Groove website. The group is based in Seattle and combine science with music to make it more accessible. Also on their website is the Math And Science Song Information, Viewable Everywhere (MASSIVE) database, which includes more than 1700 songs ranging from 'Carbon is a girl's best friend' to 'money for nothing (I want my PhD)'. *Contributed by Richard Sakurovs from CSIRO Energy Technology.* [originally from the Netwatch section of Science, September 3, 2004].

FASTS

Scientists say GDP Growth not sustainable while R&D goes Backwards
Media Release 011/04 2 September 2004

Australia's strong GDP growth is not sustainable while Australia's national investment in R&D continues to decline as a percentage of GDP. The President of FASTS, Professor Snow Barlow said Australia cannot expect to maintain GDP growth of 4% per annum while national investment in science and R&D lags the developed world.

"Where is future growth going to come from apart from new knowledge and R&D? Government's cannot simply rely on record consumer spending to underpin GDP growth. Government investment in R&D is projected to fall to 0.62% of GDP in 2004/05 – down from 0.66% in 2002-03. Investment in R&D spend as a % of GDP is an important indicator. It tells us a lot about how much of today's economic activity we are prepared to invest for our future and our children's future. Government's in Europe, US, Canada and the United Kingdom are all pressing for increased public and private sector investment in R&D".

"They understand economic growth in the global economy is increasingly dependent on the quality and capacity of the science and technology knowledge base. But Australia's investment in science and R&D as a percentage of GDP is well below the OECD average and the gap is widening.

"The Coalition and Labor must offer the electorate credible policies that prioritise building our national investment in R&D. Simply maintaining a 'steady-as-it-goes' approach will result in Australia going backwards in a highly competitive global knowledge economy", concluded Professor Barlow.

Business Expenditure on R&D (BERD) figures

The ABS released on 6 September, the latest Business Expenditure on R&D (BERD) figures for 2002/3.

Key points are:

- BERD increased by 3.6% over 2001/2.
- BERD Estimated to be $5,979m at current prices, the highest level recorded.
- This is the third successive year of increase following the declines from 1995-96 to 1998-99 and flatlining between 1998-99 and 1999-2000.
- In volume terms R&D expenditure increased by 1.5% compared with 2001-02 (ie. Real terms excluding CPI, wages movements).
- BERD decreased as a % of GDP from 0.81% in 2001-02 to 0.79% in 2002-03 (this is a key indicator for FASTS).

In current price terms, between 2001-02 and 2002-03 R&D expenditure:

increased by 12% in the manufacturing industry
increased by 9% in the scientific research industry
increased by 6% in the finance and insurance industry
decreased by 2% in the property and business services industry
decreased by 3% in the mining industry
decreased by 4% in the wholesale and retail trade industry.

In 2002-03, SA had the highest percentage (1.08%) of R&D expenditure as a % of GDP, followed by Victoria (0.99%) and New South Wales (0.80%). The states with the highest level of R&D expenditure were New South Wales ($2,139 million) and Victoria ($1,907 million), accounting for 36% and 32% of total R&D expenditure respectively.

In their Media release, the ABS say increase is 4% and volume 2%. These are rounded figures, which, I fear, will be quoted in the media rather than what the report actually states

Bradley Smith, Executive Director

Why Do One Million Australian's now Work Overseas?
Media Release 013/04, 8 September 2004

FASTS President, Professor Snow Barlow, said the report takes 'brain drain' arguments a step further by highlighting the real challenges of a fiercely competitive global market for the best and brightest scientists, mathematicians, engineers, technologists and innovators."

"Nearly one million Australians now live and work overseas. An increasing proportion are Australia's best educated and highly skilled 'knowledge' workers. That is a huge pool of talent voting with their feet and finding better opportunities overseas. In this competitive environment there is a growing imperative for Australian Governments, universities, schools, CSIRO and industry to meet the challenges of how to develop, attract, train and retain a highly skilled science and innovation workforce."

"The problem is not simply lack of resources and investment in universities and public sector research agencies, but one of a co-ordinated policy approach. Australia needs a coherent approach to managing science and engineering human resource requirements. For example, the long-term 'Brain Drain' is compounded by 'brain loss' if students are turned off science and mathematics by a lack of expert science teachers in schools or lack of early-career opportunities for researchers. The Australian 'Diaspora' is a wonderful resource of global science, research and business networks but unlike other countries we are not managing this resource. Much more attention is required to leverage value through active links with Australians working overseas and providing real opportunities to bring our 'high-fliers' and their insights and experience home. We need a major rethink of how we attract, train and retain our best science and technology workers if we are to be remotely competitive with the investment Canadians and Europeans are making to ensure they have a strong 'human capital' base to thrive in the global knowledge economy", concluded Professor Barlow.

Beyond Brain Drain comes out of a high-level international workshop organised by the Australasian Research Managers Society (ARMS) and supported by DEST, CSIRO and NHMRC. The report is distributed by FASTS and can be accessed at http://www.une.edu.au/sat/chemp/arms/

Australian Bureau of Statistics Data

Business Expenditure on R&D (BERD) and Gross Expenditure on R&D (GERD)

Table A: GROSS EXPENDITURE ON R&D ($m) (r revised)

	1996-97	1998-99	2000-01	2002-03
Business	4,234.7	r4,094.7	r4,982.6	5,978.6
Govt - C'wealth	1,266.6	r1,179.4	r1,404.8	1,531.3
Govt - State/Terr	797.7	r863.6	r951.0	950.9
Higher Ed	2,307.6	2,555.1	r2,789.8	3,429.6
Private non-profit	185.8	r225.3	r289.0	359.5
Total	**8,792.4**	**r8,918.1**	**r10,417.1**	**12,249.9**

Table B: GERD/GDP Ratios of OECD Countries

	2000-01	2002-03	Change
Finland	3.40	3.46	0.06
Japan	2.99	3.12	0.13
Iceland	2.75	3.09	0.34
Korea	2.65	2.91	0.26
United States of America	2.72	2.67	(0.05)
Germany	2.49	2.52	0.03
Denmark	na	2.52	Na
France	2.18	2.20	0.02
Austria	1.86	1.93	0.07
Canada	1.92	1.91	(0.01)
United Kingdom	1.84	1.88	0.04
Norway	na	1.67	Na
Australia	**1.55**	**1.62**	**0.07**
Czech Republic	1.33	1.30	(0.03)
Spain	0.94	1.03	0.09
Hungary	0.80	1.02	0.22
Portugal	0.80	0.93	0.13
Poland	0.66	0.59	(0.07)
Slovak Republic	0.65	0.58	(0.07)

NB: This table lists OECD countries with comparable data - not all OECD countries are listed.
Source for both tables is *ABS 8112.0 Research and Experimental Development, All Sector Summary, Australia (13/9/04)*

New President

At the FASTS AGM, held in Canberra on 24 November, Professor Tom Spurling was elected President-elect of FASTS. Tom will serve as President-elect for one year and become President in 2006-7.

Tom is currently Dean, Faculty of Engineering and Industrial Sciences, Swinburne University of Technology. Previous positions include;

2003-4	Professor of Molecular Science and Director, Industrial Research Institute Swinburne, Swinburne University of Technology
2001-2	Principal Advisor CSIRO Molecular Science
1999-2001	Project Leader, CSIRO MSS-LIPI, Jakarta Minister-Counselor (Research Cooperation) Australian Embassy, Jakarta
1997-1998	Chief, CSIRO Molecular Science
1991-1997	Chief, CSIRO Chemicals and Polymers

Tom is an Elected Fellow - Royal Australian Chemical Institute, Elected Foundation Fellow - Federation of Asian Chemical Societies, Elected Fellow - Australian Academy of Technological Sciences & Engineering and Elected Fellow - Australian Institute of Management.

In addition to his strong academic and publications record, Tom has extensive experience with commercialisation and technology transfer issues including being a director of two technology-based firms.

The positions of Secretary and Treasurer were also voted on with Professor John O'Connor and Mike Smith being returned unopposed.

Congratulations to all candidates.

Bradley Smith
Executive Director, FASTS

Report from FASTS AGM and Council meeting attended by Frederick Bouckaert on behalf of ASL

Annual General Meeting

The annual general meeting of FASTS invites Council member societies to participate as observers. Voting is done by members of the Board, which includes the FASTS executive and Board members representing clusters of societies. ASL belongs to the cluster of Aquatic Sciences represented by Dr. Pat Hutchings from the Australian Marine Sciences Association.

Items (i) – (v) were minutes, reports from President, Treasurer and Auditor and appointment of Auditors. These issues will be covered in the FASTS AGM minutes that will be distributed to ASL *(Editors Note: As the FASTS AGM Minutes are six pages long, for those interested visit the website at http://www.fasts.org/).*

The only issue requiring a vote was the election of the President-elect, with two nominations being received. The second nomination was received too late for distributing the nominee's profile before the meeting and it was unfortunate that Board members had to consider the nominee's profile fairly unprepared. The candidates were asked to leave the room in order that three questions could be formulated:

1) What are the overarching challenges for Science and Technology?
2) What is the key role of FASTS and what is the role of the President-elect?
3) Given the low priority the government is giving to environment and public goods funding, what will FASTS do to increase the standing of those issues?

Each of the candidates was then asked to present themselves, provide their capabilities, reason and motivation for the position and answer the three questions. Tom Spurling won the vote by 9-7. There was no opportunity for Council members to consult with their cluster representative regarding voting, and this to me appears a process that is not very democratic (see more below). Items (vii) *membership of the Federation* and (viii) *other business* were not covered.

Annual Council Meeting

The full minutes of this meeting will be made available by FASTS. The item of most relevance was the discussion on the new constitution and structure of FASTS. The discussion was summarised by the President as follows:

1. There is a need to bring the affiliate members in and remove the distinction between members and affiliate members. This will address the inequity and will create an opportunity for the society to grow further.
2. The structural deficit problem, identified during the last three years needs to be addressed to make the Society financially sustainable, but there are other sources of income that can deal with this; this should not necessarily be addressed by increasing membership fees. *Note that there were also remarks from the floor that the financial deficit should in itself not be a driver for structural reform.*
3. The structure of the society: there are financial and pragmatic reasons for limiting the Board structure to a small number of people rather than the 65 or so people representing member societies. FASTS has grown from member societies, but it is now recognised that it is a broader church so the definition of member societies needs to be revisited. The diversity within FASTS can be a strength, as long as the cultures can be captured to develop a clear policy agenda, realising that FASTS cannot always be all things to all people.
4. Cluster representation: FASTS needs to think whether there are other models that can achieve the same representation.

FASTS structure reform: reflections on the debate

The current structure of FASTS consists of:

Executive: President, President-elect, Vice-President, Treasurer, Executive Director, Policy Chair, Secretary

Board: Members of the Executive plus 10 representatives of member societies (clusters are: Biological Sciences, Earth Sciences, Agricultural and Food Sciences, Chemistry, Aquatic Sciences, Medical Sciences, Physical Sciences, Plant and Ecological Sciences and Technology Sciences)

Member Societies: 66 member societies, of which 12 are affiliate members with no representation on the Board (18% of member societies or 30% of fee paying members - a proportion of ASL membership fees goes to FASTS).

My impression is that the current structure of FASTS suffers from the following deficits:

- Too many tiers which make undertaking action wieldy and requires the 17 Board members to have meetings several times a year.
- A communication process that is not transparent, with on the one hand the channel of member societies communicating through their cluster representative (for matters relating to voting at the Council meeting once a year), and for more 'informal' communication through the office of the executive and at the Council meeting.
- Complaints from the executive about one-way top down communication (not much input from member societies).
- A structure that is difficult to understand, with a meeting called AGM where only Board members can vote and where decisions are made, followed by a Council meeting which has the function of an annual general meeting (broad discussions, member input), but without any decision making powers.
- A structure which favours sectorial representation, not necessarily best candidates for the positions, and which tends to skew the demographics towards male dominated older age groups.

I think a more adequate representation is a key issue of membership benefit to ASL, and I would propose that ASL put in a submission to FASTS to:

- Abolish the Board structure and replace it with an extended Executive, along the ASL model. Current cluster representatives on the Board could become executive members, but thoughts should be given as to whether clusters are the best way to represent all member societies and whether this structure would attract best candidates for the job. By becoming executive members current Board members may expect their workloads to increase?
- Remove the clusters voting representation and replace it with a one vote per member society at the AGM, to get a more equitable voting representation.

This proposal would foster a more direct communication between member societies and the FASTS Executive, would address the issues of membership and voting equity in a fairer way and bring FASTS structure in line with the structure of ASL. Issues that need to be communicated from the ASL Executive can go directly to the Executive Director, rather than being conveyed through our cluster representative.

I am happy to draft such proposal and submit it to the ASL Executive for consideration, but would seek endorsement for this after the AGM and election of the new executive.

Frederick Bouckaert
25/11/04
ACT representative on ASL executive.

Our Future Economic Growth Depends On Investment In Science
[This Article by Dr Ken Baldwin, appeared in the Canberra Times on 20 September 2004]

Much is being made in the current election campaign about trust. Who do we trust to keep our economy on track, our nation secure? In particular, who do we trust to maintain Australia's high growth in GDP?

The answer is no one, unless all the major parties set about improving our national investment in science and technology. Currently Australia is riding on the back of the structural economic reforms of the past few decades and demand for our major commodities. But once we've wrung all the gain out of these, the only way we can increase our share of the world's wealth is through innovation.

Look at what our international competitors are doing. They have placed enormous trust in science for their future. The EU and Canada have recently committed to spending 3% of GDP on R&D by 2010 to compete with similar current levels in Sweden, the United States and Japan.

The average OECD investment in total R&D spending as a percentage of GDP was 2.33% in 2001, compared with Australia's lowly 1.53%. Our latest figure of 1.62% in 2002/3 is still less than the peak of 1.65% in 1995/6. Much of this is due to chronically low levels of private sector R&D, which declined to 0.79% of GDP according to the most recent ABS statistics (0.88% in 1995/6).

Nevertheless, there is a major role for Australian governments to play. The Labor Party has set a target of reaching the OECD average of R&D expenditure by a distant 2015 although we are yet to hear of their strategies to achieve this goal. Can you imagine the public outrage if a political party wanted to target the funding of Australian sport at the level of 'average' in 10 years? In contrast, the Coalition has refused to even set targets for R&D investment.

The 41st Australia Parliament needs to invest more in public sector science, and it needs to crank up the flagging private sector R&D levels by factors of two or three. This will require a cultural change to science and innovation in our business sector, something which Federal policies should be going flat out to facilitate.

The Federation of Australian Scientific and Technological Societies (FASTS) has put forward an election plan to invest our trust in science (www.fasts.org). To improve out national R&D performance we need to introduce

* A sliding scale of R&D tax deductibility that increases with R&D intensity.
* A sliding scale for capital gains tax that rewards the longer periods of investment needed for high technology, R&D intensive industries.
* Joint government funded postdoctoral positions in industry to inject scientists into the corporate structure of business and improve the level of R&D.

However, the next government should not focus solely on private sector R&D performance - it also needs to look at the bigger, long term picture.

Starting with science in schools, we need to recognise that access to expert science, mathematics and technology teaching is a fundamental equity issue for our students and for the nation's future. We need to ensure there are enough teachers with science and mathematics degrees who are not put off from a future in teaching because of their higher HECS debt compared to their colleagues in English or history.

We need to properly fund our higher education system, with appropriate indexation of Commonwealth funding for our universities, and for our public sector research agencies. Research funding bodies should aim to fund the full cost of research and research infrastructure, so that we do not run down our human and technological research capital.

We should also change the selection criteria for Cooperative Research Centres (CRCs) to re-instate 'public good' strategic research aligned with the National Research Priorities.

A body such as the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) should take on a more strategic role to evaluate opportunities and deficiencies in the national research profile, and we need an integrated approach by Commonwealth and State governments to overcome crucial national problems in climate change, water usage and the environment.

This will require a strong element of trust. Trust in a government to spend more money now, so as to reap a long-term benefit in the future. Some decades down the track this will mean that our children can also enjoy 4% GDP growth, as well as a sustainable environment in which to live. The question is not how can we afford to do this, but how can we afford not to do this - particularly given the size of the present budget surplus. The trust that other nations have previously placed in their economic future by investing in science has been rewarded many times over, and they are increasing their commitment to do so in the years to come. The 41st Australian government has to be trusted to do the same for our future.

Dr Ken Baldwin is the winner of the 2004 Australian Government Eureka Prize for Promoting Understanding of Science for his role in initiating "Science meets Parliament". He is Senior Fellow and Deputy Director of the ARC Centre of Excellence for Quantum-Atom Optics at ANU, and chair of the Policy Committee of FASTS.

Decline in enabling mathematics and science undermine future

Joint Media Statement from Engineers Australia and FASTS, 30 September 2004

The peak engineering and science organisations have warned declining numbers of students in the enabling mathematics and sciences lie at the heart of the skills shortage. The National President of Engineers Australia, Mr Doug Jones, said much is being said by political parties about the growing skills shortage in Australia. However, there is very little commitment to engendering an interest in our school children to provide them with the basic skills for specific trades and tertiary qualifications.

"Our current and future generations of school kids are not being given enough encouragement and resources to pursue an interest in mathematics and sciences, because the schools funding debate is all about the overall amount, rather than how the funds should be allocated across the curricula".

The President of FASTS, Professor Snow Barlow said Australia's future prosperity is at risk if the low numbers of students in mathematics, physics and chemistry continue. These subjects are the creative engine underpinning engineering and all sciences. "The latest OECD data shows Australia ranks near the bottom in the percentage of university students in engineering, physics and mathematics (see attached)"

"If we want future budget surpluses then rebuilding enabling maths and science participation through investment in high quality teachers and teaching is an absolute priority," said Professor Barlow.

Mr Jones added, "While we welcome the promise of more funding for extra apprenticeships and some token extra dollars for tertiary institutions to maintain science, engineering and technology courses, such schemes will soon run out of candidates because virtually nothing is being done at the primary school level to excite an interest in technology concepts."

"An unsatisfactory level of commitment by the next federal government to providing our kids with the right mathematics and science background to qualify for a career as a tradesperson, engineer or scientist, will hold this country back and is something Australian voters will have to live with for generations," concluded Mr Jones and Professor Barlow.

Engineers Australia is the common name of the Institution of Engineers, Australia with a membership of 75,000. The ***Federation of Australian Scientific and Technological Societies*** (FASTS) represents 60,000 scientists and technologists.

Tertiary Graduates % of total					
Mathematics and Statistics		Engineering, Manufacturing and Construction		Physical Sciences	
Turkey	2.8	Korea	27.4	Germany	5.0
France	2.5	Sweden	21.7	Turkey	4.9
Italy	2.0	Finland	21.6	France	4.9
Korea	1.9	Austria	18.0	United Kingdom	4.8
Germany	1.7	Slovak Republic	17.9	New Zealand	4.2
United Kingdom	1.4	Germany	17.6	Switzerland	4.0
Spain	1.2	Italy	15.2	Korea	3.5
Switzerland	1.1	Switzerland	14.6	Spain	3.1
Country mean	**1.0**	Spain	14.3	Belgium	3.0
Czech Republic	1.0	Mexico	13.9	Austria	3.0
New Zealand	1.0	**Country mean**	**13.3**	Ireland	2.8
Belgium	1.0	Czech Republic	13.2	**Country mean**	**2.8**
United States	0.9	France	12.5	Slovak Republic	2.4
Ireland	0.9	Belgium	12.1	Iceland	2.3
Austria	0.7	Turkey	11.8	Sweden	2.3
Finland	0.6	Netherlands	10.7	Denmark	2.3
Denmark	0.6	United Kingdom	10.1	Czech Republic	2.3
Sweden	0.5	Hungary	9.1	**Australia**	**2.3**
Slovak Republic	0.5	Denmark	8.9	Netherlands	2.2
Australia	**0.5**	Ireland	7.7	Finland	2.0
Mexico	0.4	**Australia**	**7.7**	Italy	1.6
Netherlands	0.3	Norway	7.4	Mexico	1.5
Iceland	0.3	United States	6.3	United States	1.4
Hungary	0.2	New Zealand	5.7	Norway	1.1
Norway	0.2	Iceland	5.1	Hungary	0.7

***Source**: OECD, Education at a Glance 2004, Table A4.1*

CONFERENCE CAPERS

Pre-SIL Congress Tour

I was very fortunate to participate in the North-West Finnish Lapland pre-SIL Congress tour 3-7 August 2004. 32 people from 11 different countries were in the group, which included Dr Gene Likens, the President of SIL and his wife Phyllis, who are well known here in Australia.

I was the only Aussie but was listed and name-carded as from the USA ....which I very loudly disputed at the first opportunity.

Day 1. Following an evening flight from Helsinki to Kittila, north of the Arctic Circle in Finnish Lapland, and an overnight stay in Pallas National Park, the tour followed the River Muonionjoki, which is a large tributary of ther River Torne, on of the last unregulated large rivers in Europe and home to wild salmon. An early morning walk on the bleak Pallastunturi fells revealed heath-like flora. The first reindeer to appear out of the mist was really exciting....the hundredth less so. Thank heavens for the Delete button on digital cameras. All reindeer in Finland are semi- or fully domesticated and are rounded up annually.

We visited the palsamire region, where permafrost underlies a series of lenses and peat bogs, with a unique flora including exquisite (and delicious) cloudberries. Finland has the largest total area of wetland in Europe. Overnight was at the Kilpisjarvi village with a visit to the Biological research station there. Much research concentrates on the adaptive strategies of flora and fauna under harsh (and changing) Arctic climatic conditions, with a major program of small rodent (including lemmings) densities over 50 years. The station belongs to the University of Helsinki.

Day 2. A boat trip across Lake Kilpisjarvi preceded the 8km hike to the 2-border then the 3-border pole, the conjunction of Finland, Norway and Sweden, inconveniently located in a lake. We visited a biological research and nature study station that afternoon. The exhibits included research into lakes (there are 82,000 lakes in Finland), meteorological information and logs of studies of animal ecology and behaviour.

Although water is so abundant in Finland, water quality concerns are high in some areas, particularly as these relate to sewage disposal and nutrient input from forestry and agriculture. The gulf between Finland and Sweden, Bothnian Bay, has little natural mixing and blue-green algal blooms are increasingly common there. A number of management plans regarding water bodies are either in place or in planning phase but there seems to be less Government coordination of these plans than occurs in Victoria.

Day 3. A day trip into Norway focussed on trekking in Steindalen, a glacier valley in the Lyngen region. An environmental officer from the local municipality and a professor in glaciology accompanied the group on a steep hike, 7 hours in all. Unseasonally warm and fine weather ensured spectacular views down to the fjords and up into the glacial valley.

The glaciologist explained the history of global warming and cooling in Lapland, with one result that Finland is not mountainous, due to the retreat of huge glaciers 20,000 years ago, but that Norway is very mountainous indeed with jagged peaks abutting long fjords. The temperatures were in the mid-20s and the views were absolutely spectacular.

Day 4. The final day included a visit to River Ounasjoki. Rapid monitoring showed a water temperature of 4 degrees C, high oxygen levels and low nutrient levels. We climbed up to a meteorological station in the midst of a sleety wind for a presentation by research staff. We saw some of the data there regarding gradual warming and increases in CO_2 levels over the past decades. This matched changes measured in the Antarctic region. There after followed a visit to an ancient fishing village at Lake Jerisjarvi, which comprised very old wooden fishing huts, reminiscent of Brighton Beach's bathing boxes. Recreational fishing and hunting are immensely popular in Finland and need to be considered in NRM planning and management.

The tour was beneficial in two ways: first, it gave me an insight into the nature of the landscapes and the pressures on NRM in an area so different to Victoria. However, concerns such as integration of NRM solutions, community engagement, and raising awareness are global and some of the approaches in Victoria are relevant across the world. One particular concern for Finland and Norway is the inclusion of the various indigenous Lapp communities into NRM decision-making. These small and isolated groups, with three major languages, have been dis-enfranchised until recently. There are obvious parallels with Victoria's indigenous communities and I was able to discuss DSE initiatives in this area.

Second: the tour gives the opportunity to discuss views and issues with people from different countries and to establish relationships. The SIL Congress which followed in Lahti was made all the more enjoyable because of the camaraderie of the tour group.

Patricia Geraghty, Team Leader, Catchment Planning
Department of Sustainability and Environment

Report from the Second International Symposium on Riverine Landscapes

The Second International Symposium on Riverine Landscapes with the major theme being the scientific basis for restoring watercourses in landscapes was held from the 15 to 21 August in Sweden. The conference venue was held in Bredsel in far northern Sweden and was marked by being closely adjacent to the very dramatic Storforsen - the largest intact falls in Europe - on the Pite River. These magnificent falls were in full surging strength, the peak of annual discharge, due to ice melt from the distant mountains. The site was in boreal conifer forests, which were very interesting to investigate, as the ground layer was full of edible berries. Wolverines, mainly stuffed, were the only conference hazard.

The conference consisted of 75 scientists and was organized around 5 major topics; restoration needs and achievements, formulating goals and assessing success of restoration, reconciling conflicting uses and restoring multiple ecosystem services, re-establishing the dynamics and connectivity of river corridors, and restoring biodiversity in riverine landscapes. There was a sizeable group from Australia, including Sam Lake, Stuart Bunn, Jane Hughes, Nick Bond and Ben Cook from the CRCFE.

On the first day there was an excursion looking at the restoration of rivers that had been extensively changed to allow the downstream transport of logs. On the following days there were the scheduled talks and short talks outlining the subjects of the posters (giving the posters due attention). In addition there were 5 workshops. Thus, a great benefit of this conference, in comparison with the firmly regimented ones, was simply having the time to have extensive discussions on a wide range of subjects, both scientific and cultural. Details of the conference, with abstracts, are on "http://www.riverine-landscapes.ch"

Sam Lake

Recent Northern Rivers Conference on Ecological Restoration and Monitoring

Prof. Sam Lake gave a keynote address on "The ecology of stream restoration" at the 2004 Northern Rivers Conference on Ecological restoration and Monitoring at Southern Cross University, Lismore on 1 October. The other keynote address "Planning for biodiversity conservation in the real world of cost trade-offs and spatial constraints" was given by Dr. Chris Margules of CSIRO. Talks on a range of topics such as the demographics of exotic vine species to wetland dieback in a coastal swamp were given by students.

Recent Wood in Streams Symposium

The "Wood in Streams Symposium" was held at the Monash Churchill campus on the 29th and 30th September. The focus of the conference was the use of timber in stream restoration projects. It was attended by researchers from universities around Australia (Monash, Melbourne, Deakin, UNE, UWA) as well industry (SKM) and stream management agencies (Melbourne Water, Victorian CMAs and DPI, NSW Fisheries and Queensland DNRM). There was a mix of formal presentations, workshops and also an opportunity to demonstrate and discuss novel field techniques. Several CRCFE staff participated in the conference, Nick Bond presented an overview of research being conducted as part of the Granite Creeks Project (B240) and Alena Glaister demonstrated the use of a modified (and much improved) snag bag for sampling wood dwelling invertebrates. The symposium brought together a broad range of people to discuss the use of timber as part of stream restoration activities.

BOOK REVIEW

Carpenter, S.R. (2003). Regime shifts in lake ecosystems: pattern and variation. Excellence in Ecology Series, Volume 15. (Edited by O. Kinne). International Ecology Institute, Oldendorf/Luhe, Germany

A month ago, Fran Sheldon kindly invited me to review Stephen Carpenter's new book on stable states and lake ecology. I was delighted to oblige, but as time passed I was wondering how I would find two days free to read the book and write a meaningful review. Fate intervened, as she so commonly does, and I ended up in hospital last week, with the surgeon dictating that I spend 7-10 days on post-operative sick leave. What an opportunity: the fiasco of the Indian cricket test being over, I could devote myself to some serious reading. Being confined to bed for a week would allow me to finish *Tess of the d'Urbervilles*, do more than tip-toe tentatively through Norman Davies' *Europe: a history*, and re-read Andre Simon's classic *The noble grapes and the great wines of France*. But sitting on my desk, invoking endless guilt, lay Carpenter's book and a PhD thesis that, also, I was supposed to examine by the end of the month. I stuck a compromise: I would read the books by Steve Carpenter and Andre Simon simultaneously, dipping from one to the other as my fancy took me and the residual effects of a general anaesthetic waxed and waned. It proved an interesting approach.

The concept of aquatic systems existing in a limited number of stable states (or, more recently, regimes) has captured the minds of aquatic ecologists for more than a decade. It offers a unifying way of understanding why lakes and wetlands undergo rapid and all-encompassing shifts in their animal and plant communities, especially in terms of feed-forward and feed-back mechanisms maintaining one or the other state in spite of external disturbances. At a philosophic level, the concept fits neatly with a modern understanding of the non-linear nature of ecosystem change. At the practical level, it offers hope for the improved management of aquatic resources, especially in terms of identifying critical thresholds beyond which we should not push a system and the unexpected nature of the changes that take place when, foolishly, we do. The strong hysteresis inherent in changes across different states or regimes has major implications for attempts at ecosystem rehabilitation; in other words, it's much easier to bugger a system than it is to restore it. Given the importance of the topic and Stephen Carpenter's profile in the limnological community, I commenced to read his book with interest. But I was deeply disappointed by the time I had finished it. The book, in my mind, fails on two critical grounds: it is disjointed and it is too narrow for the prestigious series in which it is published.

The Introduction, by Otto Kinne, states that the book is a well-organised and clearly structured. I disagree strongly. I found the first 26 pages (Section I: "Prevalence and importance of regime shifts") to be a disjointed collection of ideas and intentions. Not only did it lack a set of unifying themes, but this introductory section failed to point the way forward to the key ideas that were covered, or should have been covered, later in the book. For example, Carpenter starts with a brief description of Lake Mendota, but never really revisits this historical material. In a book with the title of regime shifts, there would have been ample opportunity to interrogate the paleobotanical and paleozoological evidence for drastic changes in lake or wetland communities over very long time frames. But this type of material is hardly covered at all. Similarly, there is an introductory section on ecological surprises, but the concept is developed only weakly in subsequent chapters. On page 14 Carpenter takes care to distinguish between regime shifts and stable states. But the differentiation is poor, and at this stage of the book he merely notes that regime shifts "...have a wider range of explanations and models" (page 14). We are left hanging as to how the two conceptual approaches differ. In any case, I'm not sure that he fully believes his own distinction, since alternate [*sic*] stable states are invoked repeatedly throughout the monograph with little or no explanation as to why they are not regime shifts (e.g., pages 55-56, 59-65, 70-74 and again later on pages 95, 144 and 164). Carpenter revisits the conceptual basis of stable states again (and more thoroughly) on page 144-149, where he seeks to draw out some differences with regime shifts, but this re-visiting of the topic merely adds to the feeling of a disjointed text. This material at the end of the book should have been placed first up, since the stable-state terminology has become quite well established in the literature and readers will want to know how regime shifts differ from the more accepted usage of stable states. A word too on etymology: surely these are *alternative* stable states not *alternate* stable states, as it's a question of one *or* the other state, not one state and *then* the other?

The more I read the introductory material covering the conceptual underpinnings of stable-state and regime-shift theory, the more I found the text to be disjointed and incomplete. In addition to (poorly) differentiating between regime shifts and stable states, Carpenter also tries (page 10) to discriminate between regime shifts and other ecosystem changes driven by external forcing. But, as before, this differentiation is not elaborated sufficiently for its place in such a critical, early part in the book. The unresolved issue is that different groups of ecologists have quite different understanding of the concept of stable states. First there is the community perspective, where the shifts from regime to regime occur because of internal changes in population variables (i.e, in ball-and cup models, the ball moves itself from regime to regime). Second, there is the ecosystem perspective, where the ball shifts from regime to regime because of external changes in environmental parameters (i.e, the actual shape of the environmental landscape changes, causing the ball to move one way or another). These are important concepts that should have been brought out far more clearly than is the case in this monograph.

It's worth stating here that Carpenter's book is Volume 15 in the prestigious Excellence in Ecology Series, published in recognition of the author having been awarded the Ecology Institute Prize (in 2000). I have found earlier books in this series to be thought-provoking texts that made me rethink about limnology and ecology in general. Gene Likens book, *The ecosystem approach: its use and abuse* (Volume 3. 1992) and Robert Peter's book, *Science and Limnology* (Volume 6, 1995), for example, were instrumental in formulating my limnological biases. In Volume 15 of the series, I would expect the author to provide a coherent overview of the current understanding, come up with interesting new ideas as befits a leader in the field, then grapple with the main issues that are thought to lay ahead. Yet this intellectual debate doesn't occur. There are far too many places where opportunities to speculate and compare across systems or landscapes are missed. For example, on page 22 Carpenter describes (rightly) that a range of spatial scales are important in understanding how lakes function and explaining why regime shifts take place. But again this introductory material leads almost nowhere. One unexplored possibility, for example, is that a single lake, or more likely a wetland, could exist in a range of states (however defined) as a spatial mosaic (e.g., densely vegetated bands in one part and algal mats in another, with a third region dominated by phytoplankton). Are these stable states? How are individual stable states differentiated from simple vegetation succession in time? How are they differentiated from old-fashioned lake typology? There is some discussion of key measures that might be used to indicate that a change in states or regimes has taken place, but it is found at the end of the book.

My second overarching criticism - the narrowness - has two components. First, the book is conceptually limited. Second, it is geographically parochial. There is some background coverage of regime shifts and stable states in other (aquatic, terrestrial and human) systems on pages 13 and 18, but far too little. Why isn't this topic placed within the broader conceptual picture of ecological-assembly rules, niche limitations and resource gradients? At a more specific level, there is meagre mention of comparable advances in the field of terrestrial ecology, especially in rangelands ecology where the stable-states concept has proven to be very useful in both improving scientific understanding and improving land management practices. Nor is there any coverage of stable-state/regime-shift theory in explaining changes in the vegetation of coastal brackish-water systems, especially the shift from submerged vascular plants such as seagrasses, through macroalgal beds, and onto phytoplankton dominance as the terminal consequence of extreme nutrient enrichment. This is one of the best studied shifts across stable states in the entire ecological literature. There is also minimal, or no, discussion of the feedback loops (most of which involve light) involved in maintaining these different types of submerged aquatic plants.

The overview of Section II, "Regime shifts in lakes", states that its aim is to "... review observations of regime shifts in whole lake ecosystems." (page 27). But this section deals with only three types of perturbation: eutrophication, depensatory dynamics in food webs, and trophic cascades. There is little or no mention of other work in lentic water bodies, such as Brian Moss's work in the eastern UK on the loss of charophytes and submerged angiosperms from shallow lakes and wetlands, nor the above-mentioned work on shifts in coastal brackish-water plant communities.

Only two alternative states are considered for lakes (the "turbid" and clear phases) despite it being well know that there are at least three (add algal mats to macrophyte-dominance and phytoplankton-dominance) and our recent work on lakes in central Victoria would suggest a fourth: floating plants. And, to illustrate further the conceptually limited nature of the book, there is scant mention of the wide range of other factors that can result in a shift across regimes, despite the author's statements in the introductory sections that regime shifts can be caused by a number of environmental disturbances. For example, pesticides have been clearly demonstrated as one cause, and some lateral thought might suggest that salinisation and water-level manipulations also could effect shifts across stable state boundaries.

Geographical parochialism is a problem common to North-American texts, and Carpenter's text is dominated by references to a limited number of cool-temperate North-American lakes. For example, there is a discourse on pages 48-49 on trophic cascades, but each of the four lakes mentioned (Wintergreen Lake, Lake Mendota, Crystal Lake, Paul Lake) is in Michigan or Wisconsin. It is not adequate to defend this by saying that these are sites where the research has been undertaken and hence they are the best-studied examples. The monograph is published by the International Ecology Institute, and the book should have an international perspective. I failed to see much mention of tropical lakes, or waterbodies in arid, semi-arid or mediterranean zones. This neglect is not merely one of annoying an Antipodean: a comparative approach, even if only conceptual, may have uncovered interesting differences across different lake and wetland ecosystems and lead to the erection of interesting theoretical possibilities to test. The assumption that readers are aware of the limited geography covered by the text does, however, have amusing consequences. Page 40, for example, makes reference to "Rusty crayfish"; in my mind's eye I then saw images of oxidised oligochaetes, tarnished tanypods, and corroded chironomids. I'm sorry, but I don't know what a rusty crayfish is.

The disjointed organisation and narrowness of coverage could be excused if the book delivered on its core promises. I fear that it doesn't. A core aim of the book (as stated on page 23-24) is to show how the conceptual advances offered by stable-state and regime-shift theory can led to improved management of the world's aquatic resources. But Sections III and IV of the book, covering pages 55-96, are tied up with an intricate discussion of different modelling approaches which, I think, will be interest to a very small proportion of the prospective readership. I know of no natural-resource manager who would have made it through to Section V ("Can we predict thresholds without crossing them") on page 97. All would have given up 50 pages earlier. This is sad, because the book really comes into its own around page 100. For example, there is a useful analysis on pages 109-111 of five different strategies that lake managers could adopt to control phosphorus enrichment and algal blooms. A trial-and-error approach was shown to have a nearly 70 % probability of leading to an undesirable regime shift, only slightly worse that precautionary and active adaptive management (56 %) and about the same as an experimental approach to management (70 %). In other words, the only way to learn about a regime shift is to experience one. Precautionary management can prevent a shift occurring, but provides scant information on the threshold at which a shift will occur in the future.

Carpenter is absolutely right in one part of the book: on page 20 he argues that "In my view, the most exciting research in ecology today involves regime shifts". Yes, and so there is an urgent need for a good overview of stable states and regime shifts in aquatic systems. Sadly, this is not that book. The title does not indicate the contents: yes there is coverage of regime shifts, but I can see little overt coverage of patterns or variations. While some types of regime shifts are covered in the book, in fact much of it is devoted to trophic cascades. Much of the relevant literature on stable states in terrestrial and other aquatic systems is not even mentioned. Given the delightful work that Steve Carpenter has published on a diverse range of issues relating to lake ecology, it is very sad to report so negatively on his most recent book.

And to finish up, why was it interesting to read together a book on ecological theory and one on the fine wines of France? Well, they had an interesting consonance. In a most intriguing laudatio to Carpenter's book, Wolfgang Wieser wrote (page xxvii-xxviii) that Stephen had become a leading figure in lake ecosystem research because he "... deals with properties like connectivity, stability, and flexibility, which are likely to slip through the nets of lesser scientists, of aggressive reductionists, □-taxonomists and physiological ecologists." Abandon all hope now if you are unfortunate enough to fall into one of those latter three categories. And what did Andre Simon have to say on a related issue? On page 136, discussing the best temperature to serve chablis and other fine plonk, he wrote "For the wine connoisseur, no white wine should be colder than fifty degrees: but tea addicts, whose tongues are coated with tannin, and gin addicts, whose palates are pickled or seared, prefer their wine colder." It seems that every discipline has its outsiders.

Review by Paul I Boon
Sustainability Group, Victoria University
Monday 15 November 2004

FORTHCOMING CONFERENCES/WORKSHOPS

OVERSEAS

2005

The Asian Wetland Symposium will be held from 6 to 9 February at Bhubaneswar, Orissa, India. For more information, visit http://www.aws2005.com/

ASLO 2005 Aquatic Sciences Meeting, to be held in Salt Lake City, Utah, USA from 20 to 25 February. Further information visit: http://aslo.org/meetings/slc2005/

New Currents in Conserving Freshwater Systems, to be held in New York City on 7 and 8 April. Hosted by the American Museum of Natural History is sponsored by the Center for Biodiversity and Conservation, in collaboration with the World Wildlife Fund, U.S. Fish & Wildlife Service, and National Park Service. Major funding is provided by the National Oceanic and Atmospheric Administration. Additional support is provided by the American Society of Ichthyologists and Herpetologists, The Nature Conservancy, and the American Fisheries Society. Further information visit: http://cbc.amnh.org/symposia/freshwater/index.html

ASLO Summer Meeting: *A Pilgrimage Through Global Aquatic Sciences* will be held in Santiago de Compostela (NW Spain) from 19 to 24 June. Further information visit: http://aslo.org/meetings/santiago2005/

19th Annual Meeting of the Society for Conservation Biology (SCB 2005) "Conservation Biology Capacity Building & Practice in a Globalized World" will be held at the Zoology Department of the Universidade de Brasília (UnB) from 15 to 19 July. Further information visit: http://www.scb2005.unb.br/

AUSTRALIAN

2005

4th National Waterwatch Conference with the theme "Navigating the Rapids" will be held at the University of Melbourne in the Economics and Commerce Building, Parkville campus from 7 to 10 February. For more information phone 03 9412 4726 or email jane.f.ryan@dse.vic.gov.au, or see: http://www.waterwatch.org.au/conference.html

Victorian Sustainable Development Conference 2005, will be held at ZINC in Federation Square, Melbourne on 15 and 16 March. For further information, please contact Olivia Trussell at Hallmark Conferences & Events on (03) 9530 8900 or go to http://www.halledit.com.au/conferences/vicsustainable/

The 8th International Conference on the Biogeochemistry of Trace Elements (ICOBTE) will be held at the Adelaide International Convention Centre, Adelaide from 3 to 7 April. More information visit: www.clw.csiro.au/conferences/8thICOBTE/

OZWATER Convention & Exhibition will be held in Townsville from 5 to 7 May, and Brisbane from 8 to 12 May. The convention and exhibtion will address many of the key issues facing our water industry. The topics will range from policy to science and technology and, at the same time, the trade exhibition will expose around 150 different organisations to the delegates and other visitors. http://www.awaozwater.net

International Conference on Engaging Communities, an initiative of the United Nations and Queensland Government to be held from 14 to 17 August, at the Brisbane Convention and Exhibition Centre, QLD. Further information email: info@engagingcommunities2005.org or visit the website at www.engagingcommunities2005.org

Annual Australasian Society for Ecotoxicology Conference will be held at the University of Melbourne from 25 to 28 September. The theme of the conference is "Toxicological approaches to predict and assess ecosystem stress". For further information contact Carolyn Brumley on (03) 8862 3518 or cbrumley@golder.com.au or go to the website www.conferences.unimelb.edu.au/ecotox

9th Conference International Society for Salt Lake Research (ISSLR), to be held at Curtin University of Technology, WA from 26 to 30 September. Further information from j.john@curtin.edu.au

44th Annual ASL Congress is planned to be in at the University of Tasmania from 28 November to 2 December.

Australian Entomological Society's 36thAGM and Scientific Conference, Society of Australian Systematic Biologists Conference, and 7th Invertebrate Biodiversity and Conservation Conference (IBCC 2005). These conferences are to be held from 4 to 9 December at the Australian National University, Canberra. For further information see: www.invertebrates2005.com, enquiries to Sally Brown at Conference Connections Sally.brown@uq.net.au

ASL VOLUNTEERS

The following members have volunteered to speak as experts on behalf of the ASL.

If you wish to be included on the list or amend your contact details, please contact:

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